UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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ADDENDUM TO FOURTH FIVE-YEAR REVIEW REPORT DATED SEPTEMBER 23, 2016

Coakley Landfill Superfund Site
North Hampton, New Hampshire
EPA ID: NHD064424153

The fourth Five-Year Review Report (Report) for the Coakley Landfill Superfund Site (Site) in North Hampton, New Hampshire, was signed by the Director of the United States Environmental Protection Agency (EPA), Region 1's Office of Site Remediation and Restoration, on September 23, 2016. At that time, there was uncertainty about the existence of human exposures within the southern area of the GMZ, along the valley of Little River, and the extent of the plume in that direction was also unknown. These uncertainties needed to be addressed in order to completely assess the protectiveness of the remedy. Accordingly, the OU-2 and Sitewide protectiveness determination presented in the Report was "Protectiveness Deferred" and included the following Five-Year Review Protectiveness Statement in Section VII "PROTECTIVENESS STATEMENT":

> *A Sitewide protectiveness determination of the remedy cannot be made at this time until further information is obtained for OU-2. Further information will be obtained by taking the following actions:*
>
> 1. *Sampling existing or installing and sampling new monitoring wells in the southern area of the GMZ, for all COCs, PFOA/PFOS, and the other PFCs already measured.*
> 2. *Sampling any private drinking water wells that may exist within the southern area of the GMZ, for all COCs, PFOA/PFOS, and the other PFCs already measured.*
> 3. *Submitting validated data from the sampling effort aforementioned to EPA and NH DES.*
>
> *It is expected that these actions will take approximately a year to complete, at which time a protectiveness determination will be made.*

This Addendum to the Fourth Five-Year Review Report (Addendum) updates the protectiveness determination for the OU-2 and the Sitewide protectiveness statement referenced above, based on the conclusion that the groundwater exposure pathway does not pose an unacceptable human health risk.

Progress Since the Fourth Five-Year Review Completion Date

At the time of the Fourth Five Year Review, the data for 1,4-dioxane and polyfluorinated compounds (PFCs) (now more correctly known as per and polyfluoroalkyl substances or PFAS) in OU-2 indicated a need to sample or install additional monitoring wells along the southern component of the plume in order to further determine its extent in the southern direction. To address this issue, the Five Year Review Report recommended identifying existing wells (overburden & bedrock) south of monitoring well GZ-105 that could be incorporated into the annual monitoring program and function as southern GMZ boundary compliance wells. If no existing wells could be identified, the recommendation required the installation and sampling of a new well cluster (overburden and bedrock wells) for all Contaminants of Concern (COCs) and PFAS. This recommendation was necessary to determine if the Site is currently protective and is expected to remain protective of human health and the environment, in the future.

Summary of Assessment Activities

Following the Five Year Review Report's recommendation, CES Inc., contractor for the CLG, performed an evaluation of the existing monitoring wells in the southern GMZ area, and identified an existing cluster of three monitoring wells that could potentially be sampled. The wells were well FPC3A which has a ten-foot screen set from 62 to 72 feet below ground surface (the top nine feet of the screen is set in glacial till while the bottom foot is set in weathered bedrock); FPC3B which has a fifteen-foot screen set from 80.5 to 95.5 feet below ground surface; the entire screen is set in bedrock; and FPC-3C which is screened 18.5 to 28.5 feet below ground surface (1.5 feet in the outwash and 8.5 feet in the glacial till).

The wells were re-developed, sampled and incorporated into the semi-annual monitoring program for the Site. These activities are described below and provide the data in support of this Addendum.

Following the completion of well re-development, groundwater samples were collected from the three FPC-3 monitoring wells on December 8, 2016. A Site plan showing the FPC-3 groundwater monitoring well locations is included as Figure 1.

Groundwater samples were analyzed for the following parameters:

- Total Metals including antimony, arsenic, barium, beryllium, calcium, chromium, iron, lead, magnesium, manganese, nickel, potassium, sodium and vanadium (EPA Method 2008);
- New Hampshire Department of Environmental Services (NHDES) Full List of Volatile Organic Compounds (VOCs) (EPA Method 8260B);
- 1,4-dioxane (EPA Method 8260B SIM); and
- PFAS including perfluorobutanesulfonic acid (PFBS), perfluoroheptanoic acid (PFHpA), perfluorohexanesulfonic acid (PFHxS), perfluorooctanoic acid (PFOA), perfluorononanoic acid (PFNA), and perfluorooctanesulfonic acid (PFOS) (Modified EPA Method 537).

On February 10, 2017, the CLG via their consultant CES Inc. reported the results of the groundwater sampling. Groundwater samples were collected in accordance with the PFAS (PFC at the time) Field Sampling Protocol and sampling protocols contained in the 2015 Coakley

Landfill Sampling and Analysis Plan (SAP) approved by EPA and NHDES. Groundwater samples were immediately placed on ice in a cooler and submitted under chain of custody to Eastern Analytical Inc. (EAI) in Concord, New Hampshire for the analysis of metals, VOCs, and 1,4-dioxane. EAI subcontracted Vista Analytical Laboratory in El Dorado Hills, California for analysis of PFAS.

Quality Assurance protocols included analyses of equipment blank samples (completed on the water level meter) as well as a field blank sample containing lab provided deionized water for analyses listed above. Laboratory results included a Quality Assurance/Quality Control (QA/QC) package prepared in accordance with the SAP. A Tier 1 Plus data validation was completed by Data Check, Inc. of New Durham, New Hampshire. No systemic concerns were identified during the Tier 1 Plus data review; none of the data were qualified as rejected; and data completeness was 100%.

Table 1 from the CES Inc. Letter Report titled "Results of Groundwater Sampling for PFC-3 Series wells…" dated February 10, 2017 (attached), presents a summary of analytical results from samples collected from FPC-3 series monitoring wells in OU-2. As shown on the Table, one parameter (arsenic) in two wells (FPC- 3A and FPC-3C) was reported slightly above the EPA Cleanup Level (CL) as specified in the Record of Decision and the New Hampshire Department of Environmental Services Ambient Groundwater Quality Standard (NHDES AGQS) of 0.010 milligrams per liter (mg/L), at 0.012 mg/L and 0.013 mg/L, respectively.

Manganese was detected at concentrations below the CL of 0.30 milligrams per liter (mg/L) and the NHDES AGQS) (0.84 mg/L) in all wells sampled.

1,4-dioxane was reported as Not Detected (ND) in wells FPC-3A and FPC-3B, and at a concentration of 0.41 μg/L in well FPC-3C, below the CL and the NHDES AGQS of 3 μg/L.

VOCs were not detected above the laboratory detection limits in any of the wells sampled.

PFOA was reported as ND in wells FPC-3A and FPC-3B, and at an estimated concentration of 1.83 nanograms per liter (ng/L) in well FPC-3C.

PFOS was reported as ND in well FPC-3A, at an estimated concentration of 1 ng/L in well FPC-3B, and at an estimated concentration of 0.976 ng/L in well FPC-3C. All the detected concentrations of PFOA and PFOS individually and combined, were below EPA's Lifetime Health Advisory and NHDES AGQS of 70 ng/l, and screening levels based on Superfund standard default values and EPA's Regional Screening Level (RSL) calculator.

In summary, the December 2016 results of the FPC-3 monitoring well cluster sampling showed that:

- One parameter (arsenic) was detected at concentrations slightly above the CL and AGQS at FPC-3A and FPC-3C.
- VOCs, 1,4-dioxane, PFOA, PFOS, and the combined concentrations of PFOA and PFOS were reported as ND or at concentrations well below applicable the CL and NHDES AGQS, and screening levels based on Superfund standard default values and EPA's Regional Screening Level (RSL) calculator, in all three FPC-3 wells.

Subsequently, these three wells were included in the Site-wide April/May (Spring) 2017 sampling event. The wells were tested for the same parameters indicated above plus Hexavalent chromium by EPA Method 7196A.

Table 2 from the CES Inc. Letter Report Inc. titled "Results of Spring 2017 Groundwater Sampling at the Coakley Landfill…datedJune 27, 2017 (attached), presents a summary of the Spring event results. It indicates that only one parameter (arsenic) in one well (FPC-3C) slightly exceeded the CL and NHDES AGQS of 0.010 mg/L with a concentration of 0.013 mg/L.

1,4-dioxane was reported as non-detect (ND) in wells FPC-3A and FPC-3B. It was detected at a concentration of 0.48 µg/L in well FPC-3C, below the CL and NHDES AGQS of 3 µg/L.

VOCs were not detected above the laboratory detection limit in any of the wells sampled.

PFOA and PFOS were reported as non-detect in all three FPC-3 wells.

Hexavalent Chromium was not detected above the detection limit in any of the groundwater samples collected.

In general, the results of the Spring sampling event were consistent with the December 2016 sampling results and suggest that the southern extent of the plume remains in close proximity to the FPC-3 wells.

Prior to the December 2016 sampling, the agencies, through the CLG tried to obtain access from a property owner whose property lies within the GMZ and is downgradient of the FPC-3 wells in order to test a well that reportedly is used for drinking water. The efforts were unsuccessful as the property owner refused granting access to the property. Thus this well could not be tested.

From 07/11/2016 to 06/21/2017 NHDES tested 84 private drinking water wells that exist outside the GMZ. Three of those wells are located in close proximity to the southwestern corner of the GMZ (all of them outside the GMZ), and further downgradient from the private well that could not be tested. The closest well to the GMZ boundary is located in North Road, North Hampton, west and adjacent to the southwestern corner of the GMZ boundary. The second closest well is also located in North Road at approximately 0.25 miles further west-northwest from the first well, and the third closest well is located in Birch Road, North Hampton at approximately 0.50

miles south of the first well. All of three wells were tested for VOCs, and PFAS. The results were non-detect for VOCs at all three wells and PFAS were only detected in the Birch Road well, at a concentration of 4.6 ng/L for PFOA and 14 ng/L for PFOS. The first and third wells were also tested for 1,4-dioxane and the result was non-detect at both wells.

On June 16, 2017, in response to a letter from NHDES requesting the addition of eight monitoring wells to the regular monitoring program, the CLG acknowledged that there is a technical basis for adding wells FPC-3A, B, and C, among others, to the regular monitoring program. Then, on July 11, 2017 these wells were included in the Site's Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP) for the Site. Thus effectively these three wells have been incorporated into the Site's monitoring program and will be tested semi-annually (Spring and Fall), every year.

Conclusions and Recommendations

As confirmed by CES Inc. reports dated February 10, 2017 and June 27, 2017, and the results of the NHDES sampling performed at the private drinking water wells located at 67 North Road and 79 North Road in North Hampton, on July 11, 2016 and August 25, 2016, respectively, EPA finds that the data collected indicated that the remedy remains protective and there is not a current unacceptable human health risk at the Site. EPA's finding is based on the following considerations:

- the initial groundwater sampling results from three re-developed wells that are now the southernmost monitoring wells south/southwest of the landfill, were compared to the Remedy's CLs and the NHDES AGQS values for all COCs, and the only exceedance was arsenic, which was detected at concentrations slightly above the CL and AGQS (0.010 mg/L, at both well FPC-3A and well FPC-3C. All the detected concentrations of PFOA and PFOS individually and combined, were below EPA's Lifetime Health Advisory and NHDES AGQS, and screening levels based on Superfund standard default values and EPA's Regional Screening Level (RSL) calculator.

- a second round of sampling on those wells revealed consistent results with arsenic as the only exceedance at well FPC-3C. PFAS were non-detect during this round.

- sampling performed by NHDES at three private drinking water wells within close proximity to the southwestern-most edge of the GMZ revealed no detection of VOCs. PFAS were only detected in one of these wells, at a concentration of 4.6 ng/L for PFOA and 14 ng/L for PFOS. Both levels individually and combined were below the EPA's Lifetime Health Advisory and NHDES AGQS.

- the first and third wells were also tested for 1,4-dioxane and the result was non-detect at both wells.

Status of Issues and Recommendations

The following is a summary of the status of Issues and Recommendations from the 2016 Five Year Review:

Status of Recommendations from the 2016 FYR

OU #	Issue	Recommendations	Current Status	Current Implementation Status Description	Completion Date (if applicable)
2	There are currently no ICs in place for the proposed residential development site. These are needed in order to prevent the potential for further migration of the impacted groundwater plume and to ensure that such groundwater is not used as drinking water or for any other purpose.	Implement land use restrictions, and/or other ICs (*e.g.* a municipal ordinance), prohibiting the installation of new wells and the increased use of existing wells, as laid out in the August 2015 ESD.	Under Discussion	EPA and NHDES need to resume discussions with the Town of Greenland.	N/A
2	Two new contaminants, PFOA and PFOS have been identified in the groundwater but it has not been possible to test for the presence of those contaminants in sediments and surface water due to the extremely dry conditions. The surface water/sediment pathway needs further evaluation.	Determine whether it is necessary to collect surface water and/or sediment samples plus leachate samples for the analysis of PFOA/PFOS and the other PFCs already measured.	Completed	EPA Region 1 held a consultation with EPA Headquarters and proposed Site-Specific Screening Levels for the incidental ingestion of surface water and sediments by children and adults. Site Specific Screening Levels for PFOA, PFOS, and PFBS were approved for EPA Region 1 use and public disclosure. Surface water, sediment samples, and leachate samples were collected on April/May 2017 and were analyzed for PFAS and other contaminants.	02/01/2017
1,2	The recent detection of two emerging contaminants (PFOA and PFOS) in both OUs and in some private drinking water wells has the potential to impact the future remedy protectiveness.	Continue testing all previously sampled monitoring wells and private drinking water wells twice a year (spring and fall) for the next two years to determine whether there are trends indicating migration of the plume and impacts to nearby private drinking water wells.	Ongoing	In January 2017 CES Inc. tested residential wells previously tested plus additional wells designated by the agencies for Site related contaminants and six PFAS. In late April/early May 2017, CES Inc. performed the Spring Site-wide sampling event, which included testing of monitoring wells. The Fall Site-wide event is being performed in September. Two more sampling events will occur in 2018.	09/30/2018

2	The data for 1,4-dioxane and PFCs in OU-2 indicates that there is a need to sample or install additional monitoring wells along the southern component of the plume to further determine its extent in the southern direction.	Identify existing wells (overburden & bedrock) south of well GZ-105 that could be incorporated into the annual monitoring program to function as southern GMZ boundary compliance wells. If no existing wells are identified, propose location(s), install and sample a new well cluster (overburden and bedrock wells) for COCs and PFCs.	Completed	CES Inc. performed an evaluation of the existing monitoring wells in the southern GMZ area, and identified an existing cluster of three monitoring wells that could potentially be sampled (FPC-3 well cluster). The wells were tested for COCs and PFAS and incorporated into the annual monitoring program.	07/11/2017
2	Well FPC-5A needs to be decommissioned and replaced with a new well. Also two additional monitoring well couplets are needed in the area of the GMZ extension shown in the GMP renewal.	Decommission well FPC-5A and replace it with another well as close as possible to it. Also install, develop and sample two additional monitoring well couplets within the GMZ extension, for all COCs, PFOA/PFOS, and the other PFCs already measured.	Ongoing	Well FPC-5A was decommissioned and a replacement well (FPC-5AR) was installed in close proximity to well FPC-5B. EPA and NHDES have requested the CLG to perform geophysical work at an existing well in order to select the optimal location and sampling depths of the two couplets to be installed. The CLG performed the initial phase of the work; the agencies have reviewed it and will be discussing next steps with the CLG	05/30/2018
2	The concentrations of arsenic and manganese imply that reducing conditions in the groundwater downgradient of the landfill have resulted in the mobilization of naturally occurring arsenic and manganese present in overburden and bedrock. It is unclear how much comes directly from the landfill vs. mobilized by the reducing conditions created by the landfill vs. the reducing background conditions already present in the	Design and implement a background study, including sampling and analysis, as necessary, to determine if the concentrations of arsenic and manganese are reflective of background conditions or rather the result of mobilization due to the reducing conditions created by the landfill.	Ongoing	The CLG has submitted a proposal for performing this study that was prepared by CES Inc. The agencies have reviewed the proposal and will submit comments to the CLG	05/30/2018

	area due to the presence of wetlands.				
1,2	At the time this FYR Report was being prepared the CLG had not submitted validated data results for the PFOA/PFOS sampling that the CLG performed in OU-1 and OU-2. This validated data is needed to assess the protectiveness of the remedy and to precisely determine what should be the next steps.	Obtain and review validated data results for the PFOA/PFOS sampling that the CLG performed in OU-1 and OU-2.	Completed	The CLG submitted validated data for the PFOA/PFOS sampling that the CLG performed in OU-1 and OU-2.	06/28/2017
2	At the time this FYR Report was being prepared, NH DES and EPA had not received validated data results for the sampling that the NH DES performed in several off-site residential wells. This validated data is needed to assess the protectiveness of the remedy and to precisely determine what should be the next steps.	Obtain and review validated data results for the sampling that NH DES performed on residential wells at the time this Report was being prepared.	Completed	NHDES and EPA obtained validated data for the sampling performed by NHDES at the time the Fourth Five Year Review was being prepared.	11/16/2016
1,2	The CL for total chromium (50 μg/L) is considered protective because it is lower than the current MCL and the NH AGQS (both set at 100 μg/L). However, this CL is based on the assumption that there is no significant amount of hexavalent chromium in the Site's groundwater. Only trace levels of total chromium (1 – 16 μg/L) have been detected in monitoring wells since 2009 and hexavalent chromium is not normally expected in landfills. Nonetheless,	Test for the presence of hexavalent chromium in all monitoring wells at OU-1 and OU-2 for the next two sampling rounds.	Ongoing	The first round of sampling was performed during the Spring Site-wide event. No Hexavalent Chrome has been detected. The second round will be performed during the Fall Site-wide event in September 2017.	09/30/2017

	its presence at the Site is unknown and further testing is needed to confirm that this CL is adequate.				

At the time of the Five Year Review the understanding of the groundwater flow in the vicinity of the Site was that groundwater at the overburden and shallow bedrock, generally flows East to West through the landfill, and then bifurcates along two components: one to the north along the valley of Berry's Brook and one to the south, along the valley of Little River. However, after the fourth Five Year Review was completed, it was determined that while the knowledge of groundwater flow in the overburden and shallow bedrock is well known and documented, the knowledge about deep bedrock groundwater flow and the fate and transport of site COCs in this geologic stratum is very limited. Hence EPA will task the PRPs with the execution of a Site-Wide Deep Bedrock Investigation to address this data gap. This investigation is expected to last approximately two years, it's information will be considered in the next Five-Year Review, and it does not impact EPA's current ability to make a protectiveness determination, because the groundwater data and Site's information available at the present time indicates there are no human exposures to COCs above EPA CLs or State standards.

Recent surface water samples collected by NHDES and the CLG, at a couple of locations in close proximity to the landfill, have shown exceedances to EPA site specific screening levels for the incidental ingestion of surface water and sediment. This has prompted EPA to perform additional risk evaluations for this potential pathway of exposure. EPA requested the CLG to erect signs alerting the public to the fact that contaminants associated with the Site have been detected in surface waters in the area, and that further investigation and evaluation is ongoing. Four of those signs have been erected along a trail adjacent to the fenced landfill.

In addition, it has been brought to the attention of the regulatory agencies that seasonal fishing occurs at some segments of Berry's Brook. Since some of the surface water and sediment samples that have been collected by NHDES and the CLG have exceeded EPA's PFAS Site specific screening levels for the incidental ingestion of surface water and sediment, there is concern about potential PFAS exposures to consumers of Berry's Brook fish. To that effect, EPA Region 1 has developed PFAS Site specific screening levels for the consumption of fish and will task the CLG to perform fish-tissue sampling in order to determine if there is an unacceptable risk to consumers of fish from Berry's Brook, attributable to the Site.

The following table shows new Issues and Recommendations that stem from this Five Year Review Addendum:

Issues and Recommendations Identified in the Fourth Five-Year Review Addendum:

OU(s): 1 and 2	**Issue Category: Other**

	Issue: The knowledge about groundwater flow and the fate and transport of site COCs in the deep bedrock is very limited.			
	Recommendation: The CLG to conduct a Deep Bedrock Investigation (as directed by EPA) to address the gap in the knowledge of the groundwater flow at the deep bedrock and the fate and transport of PFAS and COCs in such medium.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA	12/30/2019

OU(s): **2**	**Issue Category: Monitoring**			
	Issue: Recent surface water samples collected by NHDES ànd the CLG, at a couple of locations in close proximity to the landfill, have shown exceedances to EPA site specific screening levels for the incidental ingestion of surface water and sediment.			
	Recommendation: EPA to perform additional risk evaluations for the potential pathway of exposure to PFAS from the incidental consumption of surface water and/or sediments.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	EPA	EPA	9/30/2018

OU(s): **2**	**Issue Category: Monitoring**			
	Issue: Since some of the surface water and sediment samples that have been collected by NHDES and the CLG have exceeded EPA's PFAS Site specific screening levels for the incidental ingestion of surface water and sediment, there is concern about potential PFAS exposures to consumers of Berry's Brook fish.			
	Recommendation: The CLG to conduct fish-tissue sampling along Berry's Brook to determine whether there are any human exposures to PFAS that can be attributed to the landfill, and compare the results against Site-specific regional screening levels prepared by EPA Region 1.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA	5/30/2018

Protectiveness Statements

In consideration of the investigation activities performed, as described and referenced above, and including evaluation of the new data and other information obtained since the completion of the Report for the Coakley Landfill Superfund Site, the protectiveness statement for OU-2 and the site wide protectiveness statement in the Report are accordingly revised as follows:

Protectiveness Statement for OU-2

The remedy at OU-2 is protective in the short term because the data indicates no human exposures to COCs (including PFAS) at levels exceeding either State Standards or EPA CLs. This is evidenced by the data obtained from the following:

- *annual monitoring events,*
- *the regular sampling of off-Site private drinking water supplies,*
- *the additional sampling for PFAS and VOCs performed by NH DES at numerous private residential wells near the Site's GMZ,*
- *the initial groundwater sampling from three re-developed wells that are now the southernmost monitoring wells south/southwest of the landfill,*
- *a second round of sampling on those wells, and,*
- *sampling performed by NHDES at three private drinking water wells within close proximity to the southwestern-most edge of the GMZ.*

Also, a GMZ has been established via a NH DES GMP, and ICs have been established for all properties within the GMZ. Groundwater monitoring to determine compliance with the groundwater monitoring standards for the landfill, will continue to be conducted as a component of OU-2.

Long-term protectiveness will be achieved in OU-2 when groundwater cleanup levels for all contaminants of concern are met.

<u>*Sitewide Protectiveness Statement*</u>

The remedy at all OUs currently protects human health and the environment in the short term because the following elements of the remedy are in place:

- *The wastes at the Site have been consolidated and capped under a landfill and the landfill cap is functioning as intended.*
- *A fence around the landfill, warning signs, and deed restrictions are preventing human exposures at the capped landfill.*
- *Toxicity tests that have been applied to a "worst case scenario " in the sediment samples, have revealed no significant ecological impact, and EPA has concluded that it is likely there are no significant ecological impacts in surface water and sediment at the Site.*

- *Surface water and sediment monitoring remain in place to ensure that the currently nontoxic concentrations are not increasing significantly. The monitoring has been recently expanded to include PFAS and the results are being compared to Site-specific screening levels.*
- *A landfill gas monitoring program also remains in place, as a precaution.*
- *A groundwater monitoring program which includes on-site monitoring wells and off-site private drinking water wells is in place. The data from these wells indicate there are no human exposures to PFAS and COCs at levels exceeding either State Standards or EPA CLs.*
- *A GMZ has been established via a NH DES GMP, and ICs have been established for all properties within the GMZ. Groundwater monitoring to determine compliance with the groundwater monitoring standards for the landfill, will continue to be conducted as a component of OU-2.*

However, in order for the remedy to be protective in the long-term, the following new actions must occur:

- *The CLG must conduct a Bedrock Investigation (as directed by EPA) to address the gap in the knowledge of the groundwater flow at the deep bedrock and the fate and transport of PFAS and COCs in such medium.*
- *EPA must perform additional risk evaluations for the potential pathway of exposure to PFAS from the incidental consumption of surface water and/or sediments.*
- *The CLG must conduct fish-tissue sampling along Berry's Brook to determine whether there are any human exposures to PFAS that can be attributed to the landfill, and compare the results against Site-specific regional screening levels prepared by EPA Region 1.*

Sitewide long-term protectiveness will be achieved when the actions laid out above are satisfactorily implemented, and when interim groundwater cleanup levels for all contaminants of concern are met and restrictions on the use of groundwater within OU-2 can be removed. Monitoring of the Site will continue until cleanup levels for the contaminants of concern are met.

Next Five-Year Review

The next five-year review, the fifth, will be completed by September 26, 2021.

Bryan Olson, Director
Office of Site Remediation and Restoration

9/28/17
Date

February 10, 2017

Peter Britz
Coakley Project Coordinator
1 Junkins Avenue
Portsmouth, New Hampshire 03801

RE: Results of Groundwater Sampling for FPC-3 Series wells at the Coakley Landfill North Hampton, New Hampshire

Dear Mr. Britz:

In response to the Environmental Protection Agency's (EPA) recommendation that further data be obtained to aid with a protectiveness determination of the remedy in the southern portion of the Groundwater Management Zone (GMZ) within Operable Unit 2 (OU-2) (In Section VII of EPA's 2016 Five Year Review document), CES, Inc. (CES) recommended previously installed FPC-3 series monitoring wells be sampled.

Following the completion of well development as contained in the project's Well Development Protocol, groundwater samples were collected from the three FPC-3 groundwater monitoring wells on December 8, 2016.

A Site plan showing the FPC-3 groundwater monitoring well locations are included as **Figure 1**.

SAMPLING PROCEDURES AND RESULTS

FPC-3 Series Wells

Groundwater samples from these wells were analyzed for the following parameters:

- Total Metals including antimony, arsenic, barium, beryllium, calcium, chromium, iron, lead, magnesium, manganese, nickel, potassium, sodium and vanadium via EPA Method 2008.
- Volatile Organic Compounds via New Hampshire Department of Environmental Services (NHDES) Full List (EPA Method 8260B).
- 1,4-dioxane using EPA Method 8260B SIM.

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- Perfluorinated Compounds (PFCs) including perfluorobutanesulfonic acid (PFBS), perfluoroheptanoic acid (PFHpA), perfluorohexanesulfonic acid (PFHxS), perfluorooctanoic acid (PFOA), perfluorononanoic acid (PFNA), and perfluorooctanesulfonic acid (PFOS) via Modified EPA Method 537.

Groundwater samples were collected in accordance with the PFC Field Sampling Protocol contained in **Attachment 1** and sampling protocols contained in the 2015 Coakley Landfill Sampling and Analysis Plan (SAP) approved by EPA and NHDES. Groundwater samples were immediately placed on ice in a cooler and submitted under chain of custody to Eastern Analytical Inc. (EAI) in Concord, New Hampshire for the analysis of metals, VOCs, and 1,4-dioxane. EAI subcontracted Vista Analytical Laboratory in El Dorado Hills, California for analysis of PFCs using Modified EPA Method 537.

Quality Assurance protocols included analyses of equipment blank samples (completed on the water level meter) as well as a field blank sample containing lab provided deionized water for analyses listed above.

Laboratory results for the FPC-series groundwater samples are enclosed as **Attachment 2**. Laboratory results include a Quality Assurance/Quality Control (QA/QC) package prepared in accordance with the SAP. A Tier 1 Plus data validation was completed by Data Check, Inc. of New Durham, New Hampshire. No systemic concerns were identified during the Tier 1 Plus data review. None of the data were qualified as rejected and data completeness was 100%.

Table 1 presents a summary of analytical results from samples collected from FPC-3 series monitoring wells in OU-2. As shown on the Table, one parameter (arsenic) in two wells (FPC-3A and FPC-3C) was reported slightly above the EPA Cleanup Level (CL) and NHDES Ambient Groundwater Quality Standard (AGQS) of 0.01 parts per million (ug/L). Manganese was detected at concentrations below the CL and AGQS in all wells sampled.

1,4-dioxane was reported as Not Detected (ND) in wells FPC-3A and FPC-3B. 1,4-dioxane was detected at a concentration of 0.41 ug/L in FPC-3C, well below the CL and AGQS of 3 ug/L. Volatile organic compounds were not detected above the laboratory detection limit in any of the wells sampled.

PFOA was reported as ND in FPC-3A and FPC-3B. The sample from FPC-3C detected an estimated concentration below the laboratory reporting limit of 1.83J parts per trillion (ng/L). PFOS was reported as ND in FPC-3A and at estimated concentrations in FPC-3B at 1J ng/L and FPC-3C at 0.976J. All detected concentrations are well below EPA's Lifetime Health Advisory and NHDES AGQS of 70 ng/l.

SUMMARY

Based on the results of the FPC-3 series monitoring well sampling, the following findings were made:

- Data validation indicates data are reliable and none of the data was qualified as rejected.
- One parameter (arsenic) was detected at concentrations slightly above the CL and AGQS at FPC-3A and FPC-3C.
- VOCs, 1,4-dioxane, PFOA, PFOS, and the combined concertation of PFOA and PFOS were reported as ND or at concentrations well below applicable the CL and AGQS in all three FPC-3 wells.

If you have any questions concerning this letter, please contact either of the undersigned at (207) 795-6009.

Sincerely,
CES, Inc.

Suzanne Yerina, P.G.
Project Geologist

Michael A. Deyling, P.G.
Senior Project Geologist

SLY/MAD/jna

Enclosures

TABLE 1

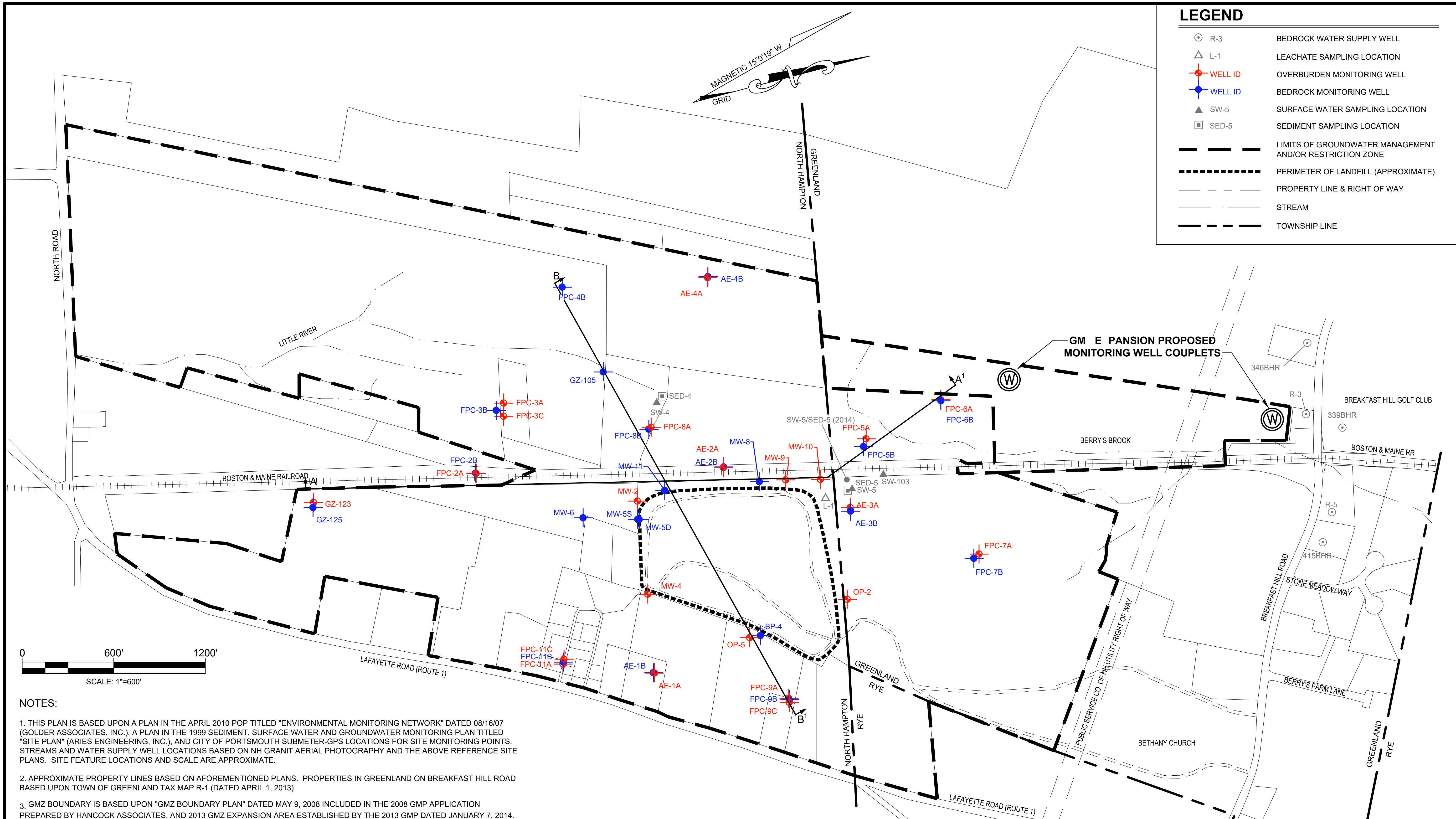
Summary of FPC-3 Groundwater Analytical Data

Coakley Landfill Superfund Site - North Hampton and Greenland, New Hampshire

OPERABLE UNIT 2 (OU-2)								
Sampling Point ID			**FPC-3A**	**FPC-3B**	**FPC-3B-DUP**	**FPC-3C**	**GZ-105**	**GZ-105-DUP**
Monitored Unit	**EPA**	**NHDES**	Till	SBR	SBR	Outwash	SBR	SBR
Date of Sample Collection	**CL**	**AGQS**	12/8/16	12/8/16	12/8/16	12/8/16	6/2/16	6/2/16
VOLATILE ORGANIC COMPOUNDS BY 8260B - (ug/L)								
1,2,4-Trimethylbenzene	---	330	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	5	5	2 U	2 U	2 U	2 U	2 U	2 U
1,4-Dichlorobenzene	---	75	1 U	1 U	1 U	1 U	1J	2J
2-Butanone(MEK)	200	4000	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	5	5	1 U	1 U	1 U	1 U	2	2
Chlorobenzene	100	100	2 U	2 U	2 U	2 U	3	4
Chloroethane	---	---	5 U	5 U	5 U	5 U	5U	5U
Diethyl Ether	---	1400	5 U	5 U	5 U	5 U	19	23
IsoPropylbenzene	---	800	1 U	1 U	1 U	1 U	1U	1U
Methyl-t-butyl ether(MTBE)	---	13	5 U	5 U	5 U	5 U	5 U	5 U
m&p-Xylene	---	10000^	1 U	1 U	1 U	1 U	1 U	1 U
o-Xylene	---	10000^	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butyl Alcohol (TBA)	---	40	30 U	30 U	30 U	30 U	30 U	30 U
Tetrachloroethene	3.5	5	2 U	2 U	2 U	2 U	2 U	2 U
Tetrahydrofuran(THF)	154	600	10 U	10 U	10 U	10 U	20J+	20J+
trans-1,2-Dichloroethene	100	100	2 U	2 U	2 U	2 U	2 U	2 U
1,4-DIOXANE BY 8260B SIM - (ug/L)								
1,4-Dioxane	3	3	0.25U	0.25U	0.25U	0.41	**39**	**41**
TOTAL METALS BY 200.8								
Total Antimony	0.006	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Total Arsenic	0.01	0.01	**0.012**	0.003	0.003	**0.013**	0.008	0.008
Total Barium	---	2	0.009	0.004	0.004	0.006	0.034	0.033
Total Beryllium	0.004	0.004	0.001U	0.001U	0.001U	0.001 U	0.001 U	0.001 U
Total Calcium	---	---	3.8	2	2	24	31	31
Total Chromium	0.05	0.1	0.003	0.001	0.001 U	0.001 U	0.001 U	0.001 U
Total Iron	---	---	1.4	0.05U	0.05U	0.15	2.1	2
Total Lead	0.015	0.015	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Total Magnesium	---	---	1.2	0.8	0.81	6.5	13	13
Total Manganese	0.3	0.84	0.027	0.014	0.014	0.12	0.29	0.28
Total Nickel	0.1	0.1	0.002J	0.001U	0.001U	0.001 U	0.005J	0.004J
Total Potassium	---	---	3.3	2	2	2.6	5.3	5.4
Total Sodium	---	---	66	65	68	12	130	130
Total Vanadium	0.26	---	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
PERFLUORINATED CHEMICALS BY MODIFIED 537 - (ng/L)								
Perfluorobutanesulfonic acid (PFBS)	---	---	7.66U	8.04U	8.00U	7.96U	11	10.3
Perfluoroheptanoic acid (PFHpA)	---	---	7.66U	8.04U	8.00U	7.96U	94.1	82.8
Perfluorohexanesulfonic acid (PFHxS)	---	---	7.66U	8.04U	8.00U	1.4J	42.4	42.5
Perfluorooctanoic acid (PFOA)	70	70	7.66U	8.04U	8.00U	1.83J	198	159
Perfluorononanoic acid (PFNA)	---	---	7.66U	8.04U	8.00U	7.96U	17.9	15.1
Perfluorooctanesulfonic (PFOS)	70	70	7.66U	1J	8.00U	0.976J	130	117
Combination of PFOA and PFOS	70	70	ND	1J	ND	2.806J	328	276
FIELD PARAMETERS								
Dissolved Oxygen (mg/l)	---	---	1.7	2.1	N/A	1.1	1.1	N/A
Oxidation Reduction Potential (mV)	---	---	6	6	N/A	17	-154	N/A
pH (standard units)	---	---	8.9	8.8	N/A	8	7.7	N/A
Specific Conductance (us/cm)	---	---	271	295	N/A	215	791	N/A
Temperature (degrees Celcius)	---	---	8	9	N/A	8	11	N/A
Turbidity (NTU)	---	---	<5	<5	N/A	<5	< 5	N/A

Notes on Last Page of Table

FIGURES



NOTES:

1. THIS PLAN IS BASED UPON A PLAN IN THE APRIL 2010 POP TITLED "ENVIRONMENTAL MONITORING NETWORK" DATED 08/16/07 (GOLDER ASSOCIATES, INC.), A PLAN IN THE 1999 SEDIMENT, SURFACE WATER AND GROUNDWATER MONITORING PLAN TITLED "SITE PLAN" (ARIES ENGINEERING, INC.), AND CITY OF PORTSMOUTH SUBMETER-GPS LOCATIONS FOR SITE MONITORING POINTS. STREAMS AND WATER SUPPLY WELL LOCATIONS BASED ON NH GRANIT AERIAL PHOTOGRAPHY AND THE ABOVE REFERENCE SITE PLANS. SITE FEATURE LOCATIONS AND SCALE ARE APPROXIMATE.

2. APPROXIMATE PROPERTY LINES BASED ON AFOREMENTIONED PLANS. PROPERTIES IN GREENLAND ON BREAKFAST HILL ROAD BASED UPON TOWN OF GREENLAND TAX MAP R-1 (DATED APRIL 1, 2013).

3. GMZ BOUNDARY IS BASED UPON "GMZ BOUNDARY PLAN" DATED MAY 9, 2008 INCLUDED IN THE 2008 GMP APPLICATION PREPARED BY HANCOCK ASSOCIATES, AND 2013 GMZ EXPANSION AREA ESTABLISHED BY THE 2013 GMP DATED JANUARY 7, 2014.

PROJECT TITLE: COAKLEY LANDFILL SITE NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE	DWG: FIGURE □	BY: BLQ	REV:	DESCRIPTION:
		DATE: 2017-01-10	REV DATE:	
SHEET TITLE: SITE PLAN	JN: 10424.003	APPROVED BY: MAD	ISSUE:	DESCRIPTION:
	SCALE: 1"=600'	CHECKED BY: MAD	ISSUE DATE:	

CES INC
Engineers • Environmental Scientists • Surveyors

ATTACHMENT 1

PFC SAMPLING PROTOCOL

FIELD SAMPLING PROTOCOLS TO AVOID CROSS-CONTAMINATION AT PERFLOURINATED COMPOUNDS (PFCS) SITES
SOP - PFCs

This Standard Operating Procedure (SOP) *Groundwater Sampling – Perfluorinated Compound Field Sampling Protocol*, provides a general framework for collecting groundwater samples at the Coakley Landfill Superfund Site in North Hampton and Greenland, New Hampshire that will minimize the potential for cross-contamination during sampling. CES, Inc.'s (CES) anticipated sample collection methods for groundwater are generally consist with those in the Sampling and Analysis Plan, Coakley Landfill Superfund Site (Revision 1, September 2015).

PURPOSE

The purpose of this SOP is to provide groundwater sampling protocols when sampling for perfluorinated compounds (PFCs). This SOP also describes a tiered approach that should be used to assist with field decisions. Sampling specific SOPs (i.e. Low Flow Sampling Using a Peristaltic Pump, SPO #4, and Sampling with a Bucket Type Bailer, SOP #3) should also be reviewed prior to conducting field sampling activities at the Coakley Landfill.

SCOPE

This procedure applies to all CES personnel and subcontractors who collect or otherwise handle samples of groundwater for analysis of PFCs. This SOP should be reviewed by all on-site personnel prior to implementation of field activities.

GENERAL

Given the low detection limits associated with PFC analysis and the many potential sources of trace levels of PFCs, field personnel are advised to act on the side of caution by strictly following these protocols, frequently replacing nitrile gloves, and rinsing field equipment to help mitigate the potential for false detections of PFCs. Specific items related to field sampling are discussed below.

QUALITY ASSURANCE/QUALITY CONTROL

Quality Assurance/Quality Control (QA/QC) samples (i.e trip blanks, field blanks, equipment blanks, duplicate samples, and matrix spike/matrix duplicate samples) will be collected as outlined in Table 4-3 of the SAP. Equipment blanks will be collected on the water level meter and disposable bailer using laboratory certified "PFC free" water.

PROCEDURES/CONSIDERATIONS

The following are procedures/considerations to be made during field activities at the Coakley Landfill during PFC sampling. A summary of the prohibited and acceptable items for PFC sites is included below.

Item Category	Allowable Items	Prohibited Items
Tubing	High-density polyethylene (HDPE) or silicon materials	Teflon® and other fluoropolymer containing materials
Decontamination	Alconox® and/or Liquinox®,potable water followed by deionized rinse	Decon 90
Sample Storage and Preservation	HDPE or polypropylene bottles, regular ice	LDPE or glass bottles, PTFE-or Teflon®-lined caps, chemical (blue) ice packs
Field Documentation	Plain paper, metal clipboard, Sharpies®, pens	Waterproof/treated paper or field books, plastic clipboards, non-Sharpies® markers, Post-It® and other adhesive paper products
Field Clothing	Well-laundered (more than six times washed after purchase) clothing made of synthetic or cotton material, no fabric softener	Clothing (including boots) made of Gore-TexTM or other synthetic water resistant and/or stain resistant material, Tyvek® material
Personal Care Products (for the day of sampling)	**Sunscreens –** Alba Organics Natural Sunscreen, Yes To Cucumbers, Aubrey Organics, Jason Natural Sun Block, Kiss My Face, Baby sunscreens that are "free" or "natural" **Insect Repellents** – Jason Natural Quit Bugging Me, Repel Lemon Eucalyptus Insect repellant, Herbal Armor, California Baby Natural Bug Spray, BabyGanics **Sunscreen and insect repellant** – Avon Skin So Soft Bug Guard – SPF 30 Lotion	Cosmetics, moisturizers, hand cream and other related products
Food and Beverage	Bottled water and hydration drinks	Pre-packaged food, fast food wrappers

Notes:
If an item will come in direct contact with field samples, then it may be necessary to have the products analyzed for PFCs to confirm that a specific batch or lot number does not contain PFCs. If an item is not expected to come into direct contact with field samples, then the product Safety Data Sheet and/or manufacturing specifications may be reviewed to determine if the item is PFC-containing by checking for any chemicals with "fluoro" in the name or the acronyms PTFE, TPE, FEP, ETFE, or PFA.

Field Equipment

Samplers will use peristaltic pumps for groundwater sample collection at depths shallower than 25 feet. Tubing will consist of dedicated LDPE and silicon tubing previously installed in Site wells. Groundwater sample collection at depths greater than 25 feet will be collected utilizing bailers and twine made of acceptable materials.

Equipment Decontamination

Field sampling equipment, including water level indicators, that are utilized at each sample location will require cleaning between uses. The SAP dictates that we use Alconox®, which is an allowable item for PFC sampling. Water used for the final rinse during decontamination of sampling equipment will be laboratory certified "PFC-free" water.

Visitors
Visitors to the site are asked to remain outside of the exclusion zone during sampling activities.

ANALYTICAL

Groundwater samples will be analyzed for PFCs using EPA Method 537 with a 20 to 30-day turnaround time. A detection limit of at least 20 parts per trillion will be used. Results will be compared the current health standards. If results meet or exceed these provisional standards or any promulgated standard at the time, sampling will be expanded to other wells within the Groundwater Management Zone and residential homes.

Samples will be tested for the following PFCs:

- Perfluorbutanesulfonic acid (PFBS)
- Perfluoroheptanoic acid (PFHpA)
- Perfluorohexanesulfonic acid (PFHxS)
- Perfluorooctanoic acid (PFOA)
- Perfluorononanoic acid (PFNA)
- Perfluorooctanesulfonic acid (PFOS)

ATTACHMENT 2

LABORATORY ANALYTICAL DATA

Eastern Analytical, Inc.

professional laboratory and drilling services

Michael A. Deyling
CES, Inc. (Lewiston)
640 Main Street
Lewiston , ME 04240

ACCREDITED IN ACCORDANCE WITH nelac

Subject: Laboratory Report

Eastern Analytical, Inc. ID:	163786
Client Identification:	Coakley Landfill | 10424
Date Received:	12/9/2016

Dear Mr. Deyling :

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted
< : "less than" followed by the reporting limit
> : "greater than" followed by the reporting limit
%R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw	1.5.17	407
Lorraine Olashaw, Lab Director	Date	# of pages (excluding cover letter)

SAMPLE CONDITIONS PAGE

EAI ID#: **163786**

Client: **CES, Inc. (Lewiston)**

Client Designation: **Coakley Landfill | 10424**

Temperature upon receipt (°C): 0.7

Acceptable temperature range (°C): 0-6

Received on ice or cold packs (Yes/No): Y

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
163786.01	GW-EB-Water Level	12/9/16	12/8/16	aqueous		Adheres to Sample Acceptance Policy
163786.02	FB-DI Water	12/9/16	12/8/16	aqueous		Adheres to Sample Acceptance Policy
163786.03	GW-FPC-3A	12/9/16	12/8/16	aqueous		Adheres to Sample Acceptance Policy
163786.04	GW-FPC-3B	12/9/16	12/8/16	aqueous		Adheres to Sample Acceptance Policy
163786.05	GW-FPC-3B-Dup	12/9/16	12/8/16	aqueous		Adheres to Sample Acceptance Policy
163786.06	GW-FPC-3C	12/9/16	12/8/16	aqueous		Adheres to Sample Acceptance Policy
163786.07	Trip Blank-8260	12/9/16	12/8/16	aqueous		Adheres to Sample Acceptance Policy
163786.08	Trip Blank-1,4 Dioxane	12/9/16	12/8/16	aqueous		Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitability, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.

All results contained in this report relate only to the above listed samples.

References include:

1) EPA 600/4-79-020, 1983

2) Standard Methods for Examination of Water and Wastewater, 20th Edition, 1998 and 22nd Edition, 2012

3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB

4) Hach Water Analysis Handbook, 2nd edition, 1992

CASE NARRATIVE REPORT

EAI ID#: **163786**

Client Designation: **Coakley Landfill | 10424**

Samples Received on: **12/9/2016**

SAMPLE RECEIPT

All samples were stored and analyzed in accordance with all quality control and method requirements unless otherwise noted below.

Additional samples were received for location GW-FPC-3A for quality control requirements.

QUALITY CONTROL

All samples were analyzed as part of an analytical QC batch consisting of a method blank, a laboratory control sample (LCS), a matrix duplicate, a matrix spike (MS) and a matrix spike duplicate (MSD), where applicable. Any deviations from QC acceptance criteria are noted below, this includes sample preservation and holding time requirements.

Method References:
EPA SW-846 Update III, IVA, IVB
EPA 600 Inorganic and Organic Methods

VOC 8260B

INITIAL CALIBRATION
The initial calibration was performed on December 13, 2016.

Average Response Factor was utilized for all compounds except for tert-Butyl Alcohol(TBA), methylene chloride, vinyl acetate, 1,1,1-trichloroethane, tert-amyl methyl ether(TAME), 4-methyl-2-pentanone(MIBK), cis-1,3-dichloropropene, trans-1,3-dichloropropene, 2-hexanone, dibromochloromethane, 1,1,1,2-tetrachloroethane, bromoform, t-1,4-dichloro-2-butene (linear regression) and bromomethane, chloroethane, iodomethane, Ethyl-t-butyl ether(ETBA), 2,2-dichloropropane, carbon tetrachloride, toluene, 1,2-dibromoethane, ethylbenzene, mp-xylene, iso-propylbenzene, n-propylbenzene, 2-chlorotoluene, 4-chlorotoluene, 1,2,4-trimethylbenzene, sec-butylbenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, n-butylbenzene, 1,2-dibromo-3-chloropropane (quadratic regression).

CONTINUING CALIBRATION
No deviations noted.

LCS and LCS DUPLICATE
An LCS sample was analyzed in duplicate in fulfillment of accuracy quality control requirements. No deviations noted.

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE
Samples GW-FPC-3A was used for the MS/MSD.
Ethyl-t-butyl ether(ETBA), tert-amyl methyl ether(TAME) and 2,2-dichloropropane deviated from acceptance criteria in the MS.
tert-amyl methyl ether(TAME) and 2,2-dichloropropane deviated from acceptance criteria in the MSD.

CASE NARRATIVE REPORT

EAI ID#: **163786**

Client Designation: **Coakley Landfill | 10424**

Samples Received on: **12/9/2016**

1,4-Dioxane 8260B SIM

INITIAL CALIBRATION
The initial calibration was performed on June 23, 2016.

Average Response Factor was utilized.

CONTINUING CALIBRATION
No deviations noted.

LCS and LCS DUPLICATE
An LCS sample was analyzed in duplicate in fulfillment of accuracy quality control requirements. No deviations noted.

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE
Sample GW-FPC-3A was used for the MS/MSD. No deviations noted.

METALS 200.8

INITIAL CALIBRATION
The Initial Calibration was performed on December 16, 2016.

LINEAR RANGE CHECK
Silver: Recovery of the Linear Range check was outside of the acceptance criteria for the 2ppm check at mass 107 and at both masses for the 5ppm check. Silver was not requested for this SDG.

Copper: Recovery of the Linear Range check was outside of the acceptance criteria for both the 2ppm and 5ppm checks for mass 63. Copper was not requested for this SDG.

CONTINUING CALIBRATION
No deviations noted.

BLANK
No deviations noted.

LCS and LCS DUPLICATE
An LCS sample was analyzed in fulfillment of accuracy quality control requirements. No deviations noted.

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE
Sample GW-FPC-3A was used for the MS/MSD. No deviations noted with the exception of sodium, which was reported from a 2x dilution. Sodium exhibited recovery below the acceptance criteria which may be attributed to the high native concentration and sample dilution.

True Values LCS/LCSD and MS/MSD
Trace metals: 1mg/l
Minerals (Al,Ca,Fe,Mg,K,Na): 11 mg/l
Mercury: 0.001mg/l

LABORATORY REPORT

EAI ID#: **163786**

Client: **CES, Inc. (Lewiston)**

Client Designation: **Coakley Landfill | 10424**

Sample ID:	GW-EB-Water Level	FB-DI Water	GW-FPC-3A	GW-FPC-3B	GW-FPC-3B-Dup	GW-FPC-3C	Trip Blank -8260
Lab Sample ID:	163786.01	163786.02	163786.03	163786.04	163786.05	163786.06	163786.07
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	12/8/16	12/8/16	12/8/16	12/8/16	12/8/16	12/8/16	12/8/16
Date Received:	12/9/16	12/9/16	12/9/16	12/9/16	12/9/16	12/9/16	12/9/16
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Date of Analysis:	12/13/16	12/13/16	12/13/16	12/13/16	12/13/16	12/14/16	12/14/16
Analyst:	BML	BML	BML	BML	BML	BML	BML
Method:	8260B	8260B	8260B	8260B	8260B	8260B	8260B
Dilution Factor:	1	1	1	1	1	1	1
Dichlorodifluoromethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chloromethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Vinyl chloride	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromomethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Trichlorofluoromethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Diethyl Ether	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acetone	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,1-Dichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
tert-Butyl Alcohol (TBA)	< 30	< 30	< 30	< 30	< 30	< 30	< 30
Methylene chloride	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Carbon disulfide	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Methyl-t-butyl ether(MTBE)	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Ethyl-t-butyl ether(ETBE)	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Isopropyl ether(DIPE)	< 5	< 5	< 5	< 5	< 5	< 5	< 5
tert-amyl methyl ether(TAME)	< 5	< 5	< 5	< 5	< 5	< 5	< 5
trans-1,2-Dichloroethene	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
2,2-Dichloropropane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
cis-1,2-Dichloroethene	< 2	< 2	< 2	< 2	< 2	< 2	< 2
2-Butanone(MEK)	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Bromochloromethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Tetrahydrofuran(THF)	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Chloroform	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1,1-Trichloroethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon tetrachloride	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloropropene	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Benzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Trichloroethene	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dichloropropane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Dibromomethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromodichloromethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dioxane	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-Methyl-2-pentanone(MIBK)	< 10	< 10	< 10	< 10	< 10	< 10	< 10
cis-1,3-Dichloropropene	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Toluene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloropropene	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1,2-Trichloroethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
2-Hexanone	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Tetrachloroethene	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,3-Dichloropropane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Dibromochloromethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dibromoethane(EDB)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chlorobenzene	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1,1,2-Tetrachloroethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Ethylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Eastern Analytical, Inc. www.easternanalytical.com | 800.287.0525 | customerservice@easternanalytical.com

LABORATORY REPORT

EAI ID#: **163786**

Client: **CES, Inc. (Lewiston)**

Client Designation: **Coakley Landfill | 10424**

Sample ID:	GW-EB-Water Level	FB-DI Water	GW-FPC-3A	GW-FPC-3B	GW-FPC-3B-Dup	GW-FPC-3C	Trip Blank -8260
Lab Sample ID:	163786.01	163786.02	163786.03	163786.04	163786.05	163786.06	163786.07
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	12/8/16	12/8/16	12/8/16	12/8/16	12/8/16	12/8/16	12/8/16
Date Received:	12/9/16	12/9/16	12/9/16	12/9/16	12/9/16	12/9/16	12/9/16
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Date of Analysis:	12/13/16	12/13/16	12/13/16	12/13/16	12/13/16	12/14/16	12/14/16
Analyst:	BML	BML	BML	BML	BML	BML	BML
Method:	8260B	8260B	8260B	8260B	8260B	8260B	8260B
Dilution Factor:	1	1	1	1	1	1	1
mp-Xylene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
o-Xylene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	< 2	< 2	< 2	< 2	< 2	< 2	< 2
IsoPropylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromobenzene	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1,2,2-Tetrachloroethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2,3-Trichloropropane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
n-Propylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Chlorotoluene	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-Chlorotoluene	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,3,5-Trimethylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
tert-Butylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trimethylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
sec-Butylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
p-Isopropyltoluene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
n-Butylbenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromo-3-chloropropane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,3,5-Trichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2,3-Trichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
4-Bromofluorobenzene (surr)	**100 %R**	**100 %R**	**101 %R**	**98 %R**	**100 %R**	**99 %R**	**99 %R**
1,2-Dichlorobenzene-d4 (surr)	**102 %R**	**101 %R**	**102 %R**	**101 %R**	**102 %R**	**102 %R**	**100 %R**
Toluene-d8 (surr)	**100 %R**	**99 %R**	**100 %R**	**99 %R**	**100 %R**	**101 %R**	**99 %R**
1,2-Dichloroethane-d4 (surr)	**101 %R**	**101 %R**	**103 %R**	**101 %R**	**105 %R**	**104 %R**	**104 %R**

QC REPORT

EAI ID#: **163786**

Client: **CES, Inc. (Lewiston)**

Client Designation: **Coakley Landfill | 10424**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Dichlorodifluoromethane	< 5	13 (65 %R)	14 (69 %R) (5 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
Chloromethane	< 2	18 (88 %R)	19 (94 %R) (7 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
Vinyl chloride	< 2	18 (91 %R)	19 (97 %R) (7 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Bromomethane	< 2	19 (93 %R)	21 (105 %R) (12 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
Chloroethane	< 5	20 (99 %R)	21 (105 %R) (6 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Trichlorofluoromethane	< 5	18 (88 %R)	19 (94 %R) (6 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Diethyl Ether	< 5	16 (79 %R)	16 (81 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Acetone	< 10	10 (58 %R)	10 (61 %R) (5 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
1,1-Dichloroethene	< 1	18 (89 %R)	18 (92 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
tert-Butyl Alcohol (TBA)	< 30	90 (94 %R)	90 (92 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Methylene chloride	< 5	20 (98 %R)	20 (102 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Carbon disulfide	< 5	16 (81 %R)	17 (86 %R) (7 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Methyl-t-butyl ether(MTBE)	< 5	23 (115 %R)	24 (118 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Ethyl-t-butyl ether(ETBE)	< 5	22 (111 %R)	23 (115 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Isopropyl ether(DIPE)	< 5	21 (104 %R)	22 (108 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
tert-amyl methyl ether(TAME)	< 5	18 (91 %R)	19 (93 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
trans-1,2-Dichloroethene	< 2	18 (92 %R)	19 (97 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,1-Dichloroethane	< 2	19 (97 %R)	21 (103 %R) (6 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
2,2-Dichloropropane	< 2	16 (79 %R)	17 (84 %R) (5 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
cis-1,2-Dichloroethene	< 2	19 (93 %R)	20 (98 %R) (5 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
2-Butanone(MEK)	< 10	20 (79 %R)	20 (81 %R) (2 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
Bromochloromethane	< 2	20 (101 %R)	21 (103 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Tetrahydrofuran(THF)	< 10	20 (117 %R)	20 (119 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Chloroform	< 2	20 (99 %R)	21 (103 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,1,1-Trichloroethane	< 2	18 (88 %R)	19 (94 %R) (6 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Carbon tetrachloride	< 2	16 (80 %R)	17 (84 %R) (6 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,1-Dichloropropene	< 2	19 (94 %R)	20 (99 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Benzene	< 1	19 (97 %R)	20 (101 %R) (5 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2-Dichloroethane	< 2	19 (97 %R)	20 (99 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Trichloroethene	< 2	19 (95 %R)	20 (99 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2-Dichloropropane	< 2	20 (101 %R)	21 (105 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Dibromomethane	< 2	20 (99 %R)	20 (102 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Bromodichloromethane	< 0.5	22 (110 %R)	23 (114 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,4-Dioxane	< 50	< 50 (123 %R)	< 50 (116 %R) (6 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
4-Methyl-2-pentanone(MIBK)	< 10	20 (101 %R)	20 (99 %R) (2 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
cis-1,3-Dichloropropene	< 2	21 (105 %R)	22 (109 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Toluene	< 1	20 (99 %R)	21 (104 %R) (5 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
trans-1,3-Dichloropropene	< 2	18 (92 %R)	19 (94 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,1,2-Trichloroethane	< 2	20 (102 %R)	21 (105 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
2-Hexanone	< 10	20 (99 %R)	20 (97 %R) (2 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
Tetrachloroethene	< 2	19 (94 %R)	20 (100 %R) (6 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,3-Dichloropropane	< 2	21 (104 %R)	21 (106 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Dibromochloromethane	< 2	21 (103 %R)	21 (105 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2-Dibromoethane(EDB)	< 2	21 (103 %R)	20 (102 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Chlorobenzene	< 2	20 (101 %R)	21 (103 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,1,1,2-Tetrachloroethane	< 2	20 (102 %R)	21 (105 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B

QC REPORT

EAI ID#: **163786**

Client: **CES, Inc. (Lewiston)**

Client Designation: **Coakley Landfill | 10424**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Ethylbenzene	< 1	20 (101 %R)	21 (105 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
mp-Xylene	< 1	42 (105 %R)	44 (110 %R) (5 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
o-Xylene	< 1	20 (100 %R)	21 (104 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Styrene	< 1	21 (104 %R)	21 (107 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Bromoform	< 2	19 (96 %R)	19 (96 %R) (0 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
IsoPropylbenzene	< 1	21 (104 %R)	22 (109 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Bromobenzene	< 2	20 (99 %R)	20 (102 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,1,2,2-Tetrachloroethane	< 2	21 (104 %R)	21 (104 %R) (0 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2,3-Trichloropropane	< 2	19 (97 %R)	19 (97 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
n-Propylbenzene	< 1	21 (104 %R)	22 (109 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
2-Chlorotoluene	< 2	20 (101 %R)	21 (104 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
4-Chlorotoluene	< 2	21 (105 %R)	22 (109 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,3,5-Trimethylbenzene	< 1	20 (102 %R)	21 (105 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
tert-Butylbenzene	< 1	20 (99 %R)	21 (103 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2,4-Trimethylbenzene	< 1	21 (103 %R)	22 (108 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
sec-Butylbenzene	< 1	20 (98 %R)	20 (102 %R) (5 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,3-Dichlorobenzene	< 1	21 (105 %R)	21 (107 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
p-Isopropyltoluene	< 1	20 (101 %R)	21 (106 %R) (5 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,4-Dichlorobenzene	< 1	21 (105 %R)	22 (108 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2-Dichlorobenzene	< 1	21 (106 %R)	22 (109 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
n-Butylbenzene	< 1	20 (98 %R)	20 (102 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2-Dibromo-3-chloropropane	< 2	18 (90 %R)	18 (90 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,3,5-Trichlorobenzene	< 1	19 (93 %R)	19 (95 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2,4-Trichlorobenzene	< 1	20 (99 %R)	20 (100 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Hexachlorobutadiene	< 0.5	18 (88 %R)	18 (91 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Naphthalene	< 5	21 (103 %R)	20 (102 %R) (0 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2,3-Trichlorobenzene	< 1	20 (100 %R)	20 (101 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
4-Bromofluorobenzene (surr)	101 %R	100 %R	100 %R	12/13/2016	% Rec	70 - 130	20	8260B
1,2-Dichlorobenzene-d4 (surr)	102 %R	99 %R	101 %R	12/13/2016	% Rec	70 - 130	20	8260B
Toluene-d8 (surr)	100 %R	100 %R	101 %R	12/13/2016	% Rec	70 - 130	20	8260B
1,2-Dichloroethane-d4 (surr)	103 %R	99 %R	98 %R	12/13/2016	% Rec	70 - 130	20	8260B

Samples were extracted and analyzed within holding time limits.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
Sample surrogate recoveries met the above stated criteria.
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.
There were no exceptions in the analyses, unless noted.
*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.
Analytes that exceed limits high but are not detected in the field samples do not impact the data. For analytes that show low recovery and are not detected in the field samples, a low point calibration standard has been analyzed to support the reporting limit.

Date of analysis for the MS and MSD is 12/14/2016.

QC REPORT

EAI ID#: **163786**

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Parameter Name	MS/MSD Parent ID	MS/MSD Parent	Matrix Spike	MSD	Analysis Date	Units	Limits	RPD	Method
Dichlorodifluoromethane	163786.03	< 5	14 (71 %R)	14 (68 %R) (3 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
Chloromethane	163786.03	< 2	17 (86 %R)	17 (87 %R) (1 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
Vinyl chloride	163786.03	< 2	20 (99 %R)	19 (96 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Bromomethane	163786.03	< 2	18 (90 %R)	20 (101 %R) (11 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
Chloroethane	163786.03	< 5	20 (102 %R)	20 (102 %R) (0 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Trichlorofluoromethane	163786.03	< 5	19 (95 %R)	18 (92 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Diethyl Ether	163786.03	< 5	15 (77 %R)	15 (74 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Acetone	163786.03	< 10	10 (58 %R)	10 (55 %R) (5 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
1,1-Dichloroethene	163786.03	< 1	19 (96 %R)	20 (98 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
tert-Butyl Alcohol (TBA)	163786.03	< 30	80 (79 %R)	70 (73 %R) (8 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Methylene chloride	163786.03	< 5	20 (98 %R)	19 (96 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Carbon disulfide	163786.03	< 5	18 (87 %R)	18 (88 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Methyl-t-butyl ether(MTBE)	163786.03	< 5	17 (85 %R)	18 (91 %R) (7 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Ethyl-t-butyl ether(ETBE)	163786.03	< 5	* 12 (60 %R)	14 (70 %R) (16 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Isopropyl ether(DIPE)	163786.03	< 5	20 (100 %R)	20 (99 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
tert-amyl methyl ether(TAME)	163786.03	< 5	* 12 (59 %R)	* 13 (65 %R) (10 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
trans-1,2-Dichloroethene	163786.03	< 2	19 (95 %R)	19 (96 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,1-Dichloroethane	163786.03	< 2	20 (98 %R)	20 (98 %R) (0 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
2,2-Dichloropropane	163786.03	< 2	* 8 (39 %R)	* 9 (47 %R) (17 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
cis-1,2-Dichloroethene	163786.03	< 2	19 (95 %R)	19 (97 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
2-Butanone(MEK)	163786.03	< 10	10 (73 %R)	10 (70 %R) (3 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
Bromochloromethane	163786.03	< 2	19 (97 %R)	19 (95 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Tetrahydrofuran(THF)	163786.03	< 10	20 (107 %R)	20 (105 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Chloroform	163786.03	< 2	20 (100 %R)	20 (99 %R) (0 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,1,1-Trichloroethane	163786.03	< 2	15 (76 %R)	17 (83 %R) (9 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Carbon tetrachloride	163786.03	< 2	15 (74 %R)	16 (80 %R) (8 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,1-Dichloropropene	163786.03	< 2	20 (101 %R)	20 (100 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Benzene	163786.03	< 1	20 (98 %R)	20 (98 %R) (0 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2-Dichloroethane	163786.03	< 2	19 (95 %R)	19 (94 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Trichloroethene	163786.03	< 2	19 (97 %R)	20 (98 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2-Dichloropropane	163786.03	< 2	19 (97 %R)	20 (99 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Dibromomethane	163786.03	< 2	19 (96 %R)	19 (96 %R) (0 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Bromodichloromethane	163786.03	< 0.5	21 (105 %R)	22 (108 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,4-Dioxane	163786.03	< 50	< 50 (109 %R)	< 50 (111 %R) (2 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
4-Methyl-2-pentanone(MIBK)	163786.03	< 10	20 (85 %R)	20 (85 %R) (0 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
cis-1,3-Dichloropropene	163786.03	< 2	17 (86 %R)	18 (90 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Toluene	163786.03	< 1	21 (102 %R)	20 (101 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
trans-1,3-Dichloropropene	163786.03	< 2	14 (70 %R)	15 (73 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,1,2-Trichloroethane	163786.03	< 2	20 (101 %R)	19 (95 %R) (5 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
2-Hexanone	163786.03	< 10	20 (86 %R)	20 (82 %R) (5 RPD)	12/13/2016	ug/L	40 - 160	20	8260B
Tetrachloroethene	163786.03	< 2	20 (99 %R)	20 (98 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,3-Dichloropropane	163786.03	< 2	20 (101 %R)	20 (98 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Dibromochloromethane	163786.03	< 2	19 (96 %R)	19 (96 %R) (0 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2-Dibromoethane(EDB)	163786.03	< 2	19 (95 %R)	18 (92 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Chlorobenzene	163786.03	< 2	20 (102 %R)	20 (99 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,1,1,2-Tetrachloroethane	163786.03	< 2	19 (94 %R)	19 (95 %R) (0 RPD)	12/13/2016	ug/L	70 - 130	20	8260B

QC REPORT

EAI ID#: **163786**

Client: **CES, Inc. (Lewiston)**

Client Designation: **Coakley Landfill | 10424**

Parameter Name	MS/MSD Parent ID	MS/MSD Parent	Matrix Spike	MSD	Analysis Date	Units	Limits	RPD	Method
Ethylbenzene	163786.03	< 1	21 (105 %R)	21 (102 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
mp-Xylene	163786.03	< 1	44 (110 %R)	43 (106 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
o-Xylene	163786.03	< 1	20 (102 %R)	20 (100 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Styrene	163786.03	< 1	21 (106 %R)	21 (103 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Bromoform	163786.03	< 2	18 (87 %R)	17 (86 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
IsoPropylbenzene	163786.03	< 1	22 (110 %R)	22 (108 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Bromobenzene	163786.03	< 2	20 (98 %R)	20 (98 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,1,2,2-Tetrachloroethane	163786.03	< 2	20 (98 %R)	20 (98 %R) (0 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2,3-Trichloropropane	163786.03	< 2	19 (93 %R)	19 (93 %R) (0 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
n-Propylbenzene	163786.03	< 1	22 (109 %R)	22 (111 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
2-Chlorotoluene	163786.03	< 2	21 (103 %R)	21 (105 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
4-Chlorotoluene	163786.03	< 2	21 (106 %R)	21 (107 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,3,5-Trimethylbenzene	163786.03	< 1	21 (103 %R)	21 (106 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
tert-Butylbenzene	163786.03	< 1	21 (103 %R)	21 (105 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2,4-Trimethylbenzene	163786.03	< 1	21 (106 %R)	21 (105 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
sec-Butylbenzene	163786.03	< 1	21 (103 %R)	21 (106 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,3-Dichlorobenzene	163786.03	< 1	21 (103 %R)	21 (104 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
p-Isopropyltoluene	163786.03	< 1	21 (104 %R)	21 (105 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,4-Dichlorobenzene	163786.03	< 1	21 (103 %R)	21 (105 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2-Dichlorobenzene	163786.03	< 1	21 (105 %R)	21 (104 %R) (1 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
n-Butylbenzene	163786.03	< 1	20 (99 %R)	20 (101 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2-Dibromo-3-chloropropane	163786.03	< 2	15 (75 %R)	15 (77 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,3,5-Trichlorobenzene	163786.03	< 1	18 (90 %R)	18 (92 %R) (2 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2,4-Trichlorobenzene	163786.03	< 1	19 (92 %R)	19 (95 %R) (3 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Hexachlorobutadiene	163786.03	< 0.5	18 (87 %R)	18 (92 %R) (5 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
Naphthalene	163786.03	< 5	19 (93 %R)	19 (97 %R) (4 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
1,2,3-Trichlorobenzene	163786.03	< 1	19 (94 %R)	19 (94 %R) (0 RPD)	12/13/2016	ug/L	70 - 130	20	8260B
4-Bromofluorobenzene (surr)	163786.03	101 %R	102 %R	99 %R	12/13/2016	% Rec	70 - 130	20	8260B
1,2-Dichlorobenzene-d4	163786.03	102 %R	100 %R	100 %R	12/13/2016	% Rec	70 - 130	20	8260B
Toluene-d8 (surr)	163786.03	100 %R	102 %R	100 %R	12/13/2016	% Rec	70 - 130	20	8260B

Samples were extracted and analyzed within holding time limits.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
Sample surrogate recoveries met the above stated criteria.
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.
There were no exceptions in the analyses, unless noted.
*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

Date of analysis for the MS and MSD is 12/14/2016.

LABORATORY REPORT

EAI ID#: **163786**

Client: **CES, Inc. (Lewiston)**

Client Designation: **Coakley Landfill | 10424**

Sample ID:	GW-EB-Water Level	FB-DI Water	GW-FPC-3A	GW-FPC-3B	GW-FPC-3B-Dup	GW-FPC-3C	Trip Blank -1,4 Dioxane
Lab Sample ID:	163786.01	163786.02	163786.03	163786.04	163786.05	163786.06	163786.08
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	12/8/16	12/8/16	12/8/16	12/8/16	12/8/16	12/8/16	12/8/16
Date Received:	12/9/16	12/9/16	12/9/16	12/9/16	12/9/16	12/9/16	12/9/16
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Date of Analysis:	12/13/16	12/13/16	12/13/16	12/13/16	12/13/16	12/13/16	12/13/16
Analyst:	VG	VG	VG	VG	VG	VG	VG
Method:	8260B SIM	8260B SIM	8260B SIM	8260B SIM	8260B SIM	8260B SIM	8260B SIM
Dilution Factor:	1	1	1	1	1	1	1
1,4-Dioxane	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	**0.41**	< 0.25
4-Bromofluorobenzene (surr)	**112 %R**	**111 %R**	**109 %R**	**109 %R**	**110 %R**	**109 %R**	**108 %R**
Toluene-d8 (surr)	**93 %R**	**93 %R**	**94 %R**	**94 %R**	**94 %R**	**94 %R**	**94 %R**

QC REPORT

EAI ID#: **164786**

Client:

Client Designation:

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
1,4-Dioxane	< 0.25	5.2 (105 %R)	5.2 (105 %R) (0 RPD)	ug/L	12/13/16	70 - 130	20	8260B
4-Bromofluorobenzene (surr)	108 %R	116 %R	116 %R	% Rec	12/13/16	70 - 130	50	8260B
Toluene-d8 (surr)	93 %R	94 %R	94 %R	% Rec	12/13/16	70 - 130	50	8260B

Parameter Name	MS/MSD Parent ID	MS/MSD Parent	Matrix Spike	MSD	Units	Date of Analysis	Limits	RPD	Method
1,4-Dioxane	163786.03	< 0.25	4.0 (80 %R)	4.7 (94 %R) (16 RPD)	ug/L	12/13/16	70-130	20	8260B
4-Bromofluorobenzene	163786.03	101 %R	117 %R	119 %R	%	12/13/16		50	8260B
Toluene-d8 (surr)	163786.03	100 %R	95 %R	95 %R	%	12/13/16		50	8260B

Samples were analyzed within holding times unless noted on the sample results page.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.
Exceptions to the above statements are flagged or noted above or on the QC Narrative page.
*/! Flagged analyte recoveries deviated from the QA/QC limits.

LABORATORY REPORT

EAI ID#: **163786**

Client: **CES, Inc. (Lewiston)**

Client Designation: **Coakley Landfill | 10424**

Sample ID:	GW-EB-Water Level	FB-DI Water	GW-FPC-3A	GW-FPC-3B					
Lab Sample ID:	163786.01	163786.02	163786.03	163786.04					
Matrix:	aqueous	aqueous	aqueous	aqueous					
Date Sampled:	12/8/16	12/8/16	12/8/16	12/8/16	**Analytical Matrix**	**Units**	**Date of Analysis**	**Method**	**Analyst**
Date Received:	12/9/16	12/9/16	12/9/16	12/9/16					
Antimony	< 0.001	< 0.001	< 0.001	< 0.001	AqTot	mg/L	12/16/16	200.8	DS
Arsenic	< 0.001	< 0.001	**0.012**	**0.003**	AqTot	mg/L	12/16/16	200.8	DS
Barium	< 0.001	< 0.001	**0.009**	**0.004**	AqTot	mg/L	12/16/16	200.8	DS
Beryllium	< 0.001	< 0.001	< 0.001	< 0.001	AqTot	mg/L	12/16/16	200.8	DS
Calcium	< 0.05	< 0.05	**3.8**	**2.0**	AqTot	mg/L	12/16/16	200.8	DS
Chromium	< 0.001	< 0.001	**0.003**	**0.001**	AqTot	mg/L	12/16/16	200.8	DS
Iron	< 0.05	< 0.05	**1.4**	< 0.05	AqTot	mg/L	12/16/16	200.8	DS
Lead	< 0.001	< 0.001	< 0.001	< 0.001	AqTot	mg/L	12/16/16	200.8	DS
Magnesium	< 0.05	< 0.05	**1.2**	**0.80**	AqTot	mg/L	12/16/16	200.8	DS
Manganese	< 0.005	< 0.005	**0.027**	**0.014**	AqTot	mg/L	12/16/16	200.8	DS
Nickel	< 0.001	< 0.001	**0.002**	< 0.001	AqTot	mg/L	12/16/16	200.8	DS
Potassium	< 0.05	< 0.05	**3.3**	**2.0**	AqTot	mg/L	12/16/16	200.8	DS
Sodium	< 5	< 5	**66**	**65**	AqTot	mg/L	12/16/16	200.8	DS
Vanadium	< 0.005	< 0.005	< 0.005	< 0.005	AqTot	mg/L	12/16/16	200.8	DS

Sample ID:	GW-FPC-3B-Dup	GW-FPC-3C					
Lab Sample ID:	163786.05	163786.06					
Matrix:	aqueous	aqueous					
Date Sampled:	12/8/16	12/8/16	**Analytical Matrix**	**Units**	**Date of Analysis**	**Method**	**Analyst**
Date Received:	12/9/16	12/9/16					
Antimony	< 0.001	< 0.001	AqTot	mg/L	12/16/16	200.8	DS
Arsenic	**0.003**	**0.013**	AqTot	mg/L	12/16/16	200.8	DS
Barium	**0.004**	**0.006**	AqTot	mg/L	12/16/16	200.8	DS
Beryllium	< 0.001	< 0.001	AqTot	mg/L	12/16/16	200.8	DS
Calcium	**2.0**	**24**	AqTot	mg/L	12/16/16	200.8	DS
Chromium	< 0.001	< 0.001	AqTot	mg/L	12/16/16	200.8	DS
Iron	< 0.05	**0.15**	AqTot	mg/L	12/16/16	200.8	DS
Lead	< 0.001	< 0.001	AqTot	mg/L	12/16/16	200.8	DS
Magnesium	**0.81**	**6.5**	AqTot	mg/L	12/16/16	200.8	DS
Manganese	**0.014**	**0.12**	AqTot	mg/L	12/16/16	200.8	DS
Nickel	< 0.001	< 0.001	AqTot	mg/L	12/16/16	200.8	DS
Potassium	**2.0**	**2.6**	AqTot	mg/L	12/16/16	200.8	DS
Sodium	**68**	**12**	AqTot	mg/L	12/19/16	200.8	DS
Vanadium	< 0.005	< 0.005	AqTot	mg/L	12/16/16	200.8	DS

GW-FPC-3A & GW-FPC-3B: Sodium analyzed on 12/19/2016 at a 2x dilution.
GW-FPC-3C: Sodium analyzed on 12/16/2016 at a 2x dilution.

QC REPORT

EAI ID#: **163786**

Client: **CES, Inc. (Lewiston)**

Client Designation: **Coakley Landfill | 10424**

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
Antimony	< 0.001	1.1 (107 %R)	NA	mg/L	12/16/16	85 - 115	20	200.8
Arsenic	< 0.001	1.0 (101 %R)	NA	mg/L	12/16/16	85 - 115	20	200.8
Barium	< 0.001	1.1 (106 %R)	NA	mg/L	12/16/16	85 - 115	20	200.8
Beryllium	< 0.001	1.1 (106 %R)	NA	mg/L	12/16/16	85 - 115	20	200.8
Calcium	< 0.05	11 (99 %R)	NA	mg/L	12/16/16	85 - 115	20	200.8
Chromium	< 0.001	1.0 (100 %R)	NA	mg/L	12/16/16	85 - 115	20	200.8
Iron	< 0.05	10 (95 %R)	NA	mg/L	12/16/16	85 - 115	20	200.8
Lead	< 0.001	1.0 (101 %R)	NA	mg/L	12/16/16	85 - 115	20	200.8
Magnesium	< 0.05	12 (106 %R)	NA	mg/L	12/16/16	85 - 115	20	200.8
Manganese	< 0.005	1.0 (101 %R)	NA	mg/L	12/16/16	85 - 115	20	200.8
Nickel	< 0.001	0.94 (94 %R)	NA	mg/L	12/16/16	85 - 115	20	200.8
Potassium	< 0.05	11 (100 %R)	NA	mg/L	12/16/16	85 - 115	20	200.8
Sodium	< 5	11 (100 %R)	NA	mg/L	12/16/16	85 - 115	20	200.8
Vanadium	< 0.005	1.0 (101 %R)	NA	mg/L	12/16/16	85 - 115	20	200.8

Samples were analyzed within holding times unless noted on the sample results page.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.
Exceptions to the above statements are flagged or noted above or on the QC Narrative page.
*/! Flagged analyte recoveries deviated from the QA/QC limits.

QC REPORT

EAI ID#: **163786**

Client: **CES, Inc. (Lewiston)**

Client Designation: **Coakley Landfill | 10424**

Parameter Name	MS/MSD Parent ID	MS/MSD Parent	Matrix Spike	MSD	Units	Date of Analysis	Limits	RPD	Method
Antimony	163786.03	< 0.001	1.0 (104 %R)	1.0 (103 %R) (1 RPD)	mg/L	12/16/16	70-130	20	200.8
Arsenic	163786.03	0.012	1.0 (101 %R)	1.0 (99 %R) (2 RPD)	mg/L	12/16/16	70-130	20	200.8
Barium	163786.03	0.009	1.0 (104 %R)	1.0 (103 %R) (1 RPD)	mg/L	12/16/16	70-130	20	200.8
Beryllium	163786.03	< 0.001	0.93 (93 %R)	0.89 (89 %R) (4 RPD)	mg/L	12/16/16	70-130	20	200.8
Calcium	163786.03	3.8	15 (97 %R)	14 (97 %R) (0 RPD)	mg/L	12/16/16	70-130	20	200.8
Chromium	163786.03	0.003	0.92 (91 %R)	0.92 (92 %R) (0 RPD)	mg/L	12/16/16	70-130	20	200.8
Iron	163786.03	1.4	11 (85 %R)	11 (84 %R) (2 RPD)	mg/L	12/16/16	70-130	20	200.8
Lead	163786.03	< 0.001	0.98 (97 %R)	0.97 (97 %R) (0 RPD)	mg/L	12/16/16	70-130	20	200.8
Magnesium	163786.03	1.2	12 (97 %R)	11 (93 %R) (4 RPD)	mg/L	12/16/16	70-130	20	200.8
Manganese	163786.03	0.027	0.96 (93 %R)	0.95 (92 %R) (1 RPD)	mg/L	12/16/16	70-130	20	200.8
Nickel	163786.03	0.002	0.86 (85 %R)	0.85 (85 %R) (1 RPD)	mg/L	12/16/16	70-130	20	200.8
Potassium	163786.03	3.3	13 (90 %R)	13 (88 %R) (2 RPD)	mg/L	12/16/16	70-130	20	200.8
Sodium	163786.03	66	72 (55 %R)	71 (45 %R) (2 RPD)	mg/L	12/19/16	70-130	20	200.8
Vanadium	163786.03	< 0.005	0.94 (93 %R)	0.94 (94 %R) (0 RPD)	mg/L	12/16/16	70-130	20	200.8

Sodium: The matrix spike and matrix spike duplicate deviated below the acceptance criteria. This may be attributed to the high native concentration and dilution required to bring concentrations into the calibration range.

Samples were analyzed within holding times unless noted on the sample results page.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.
Exceptions to the above statements are flagged or noted above or on the QC Narrative page.
*/! Flagged analyte recoveries deviated from the QA/QC limits.

December 22, 2016

Vista Work Order No. 1601554

Ms. Jennifer Laramie
Eastern Analytical, Inc.
25 Chennell Drive
Concord, NH 03301

Dear Ms. Laramie,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on December 13, 2016. This sample set was analyzed on a standard turn-around time, under your Project Name '163786 NH 2433'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Karen Lopez for

Martha Maier
Laboratory Director

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Analytical Laboratory 1104 Windfield Way El Dorado Hills, CA 95762 ph: 916-673-1520 fx: 916-673-0106 www.vista-analytical.com

Vista Work Order No. 1601554
Case Narrative

Sample Condition on Receipt:

Six aqueous samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. As directed, the sample ID on the Chain of Custody was used for sample "GW-FPC-3B".

Analytical Notes:

Modified EPA Method 537

The aqueous samples were extracted and analyzed for a selected list of 6 PFAS using Modified EPA Method 537.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above the RLs. The OPR recoveries were within the method acceptance criteria

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.

As requested, an MS/MSD was performed on sample "GW-FPC-3A".

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1601554-01	GW-EB-Water Level		08-Dec-16 09:45	13-Dec-16 10:33	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1601554-02	FB-DI Water		08-Dec-16 09:30	13-Dec-16 10:33	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1601554-03	GW-FPC-3A	MS/MSD	08-Dec-16 14:30	13-Dec-16 10:33	HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
1601554-04	GW-FPC-3B		08-Dec-16 13:30	13-Dec-16 10:33	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1601554-05	GW-FPC-3B-Dup		08-Dec-16 13:30	13-Dec-16 10:33	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1601554-06	GW-FPC-3C		08-Dec-16 15:43	13-Dec-16 10:33	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank — Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B6L0076	Lab Sample:	B6L0076-BLK1
Sample Size:	0.125 L	Date Extracted:	14-Dec-2016 9:47	Date Analyzed:	19-Dec-16 17:59 Column: BEH C18

Analyte	Conc. (ng/L)	RL	MDL	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	8.00	1.79		IS	13C3-PFBS	102	60 - 150	
PFHpA	ND	8.00	0.591		IS	13C4-PFHpA	83.1	60 - 150	
PFHxS	ND	8.00	0.947		IS	18O2-PFHxS	92.4	60 - 150	
PFOA	ND	8.00	0.651		IS	13C2-PFOA	84.5	60 - 150	
PFOS	ND	8.00	0.807		IS	13C8-PFOS	87.7	60 - 150	
PFNA	ND	8.00	0.810		IS	13C5-PFNA	94.7	50 - 150	

MDL - Method detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to MDL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OPR

Modified EPA Method 537

Matrix: Aqueous
Sample Size: 0.125 L

QC Batch: B6L0076
Date Extracted: 14-Dec-2016 9:47

Lab Sample: B6L0076-BS1
Date Analyzed: 19-Dec-16 17:22 Column: BEH C18

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
PFBS	87.0	80.0	109	60 - 130	IS	13C3-PFBS	101	60 - 150
PFHpA	92.0	80.0	115	70 - 130	IS	13C4-PFHpA	84.2	60 - 150
PFHxS	86.6	80.0	108	70 - 130	IS	18O2-PFHxS	90.1	60 - 150
PFOA	93.7	80.0	117	70 - 130	IS	13C2-PFOA	91.2	60 - 150
PFOS	90.7	80.0	113	70 - 130	IS	13C8-PFOS	93.6	60 - 150
PFNA	82.5	80.0	103	50 - 130	IS	13C5-PFNA	96.6	50 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: GW-EB-Water Level — Modified EPA Method 537

Client Data
Name: Eastern Analytical, Inc.
Project: 163786 NH 2433
Date Collected: 08-Dec-2016 9:45

Sample Data
Matrix: Aqueous
Sample Size: 0.123 L

Laboratory Data
Lab Sample: 1601554-01
QC Batch: B6L0076
Date Analyzed: 19-Dec-16 18:23 Column: BEH C18
Date Received: 13-Dec-2016 10:33
Date Extracted: 14-Dec-2016 9:47

Analyte	Conc. (ng/L)	RL	MDL	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	8.12	1.82		IS	13C3-PFBS	112	60 - 150	
PFHpA	ND	8.12	0.600		IS	13C4-PFHpA	96.9	60 - 150	
PFHxS	ND	8.12	0.961		IS	18O2-PFHxS	98.8	60 - 150	
PFOA	ND	8.12	0.660		IS	13C2-PFOA	82.6	60 - 150	
PFOS	ND	8.12	0.819		IS	13C8-PFOS	94.9	60 - 150	
PFNA	ND	8.12	0.822		IS	13C5-PFNA	97.2	50 - 150	

MDL - Method detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to MDL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: FB-DI Water — Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Eastern Analytical, Inc.	Matrix:	Aqueous	Lab Sample:	1601554-02	Date Received:	13-Dec-2016 10:33
Project:	163786 NH 2433	Sample Size:	0.123 L	QC Batch:	B6L0076	Date Extracted:	14-Dec-2016 9:47
Date Collected:	08-Dec-2016 9:30			Date Analyzed:	19-Dec-16 18:35 Column: BEH C18		

Analyte	Conc. (ng/L)	RL	MDL	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	8.13	1.82		IS	13C3-PFBS	106	60 - 150	
PFHpA	ND	8.13	0.601		IS	13C4-PFHpA	82.1	60 - 150	
PFHxS	ND	8.13	0.963		IS	18O2-PFHxS	95.9	60 - 150	
PFOA	ND	8.13	0.662		IS	13C2-PFOA	85.7	60 - 150	
PFOS	ND	8.13	0.820		IS	13C8-PFOS	94.1	60 - 150	
PFNA	ND	8.13	0.823		IS	13C5-PFNA	91.1	50 - 150	

MDL - Method detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to MDL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: GW-FPC-3A

Modified EPA Method 537

Client Data
Name: Eastern Analytical, Inc.
Project: 163786 NH 2433
Date Collected: 08-Dec-2016 14:30

Sample Data
Matrix: Aqueous
Sample Size: 0.130 L

Laboratory Data
Lab Sample: 1601554-03
QC Batch: B6L0076
Date Analyzed: 19-Dec-16 18:48 Column: BEH C18
Date Received: 13-Dec-2016 10:33
Date Extracted: 14-Dec-2016 9:47

Analyte	Conc. (ng/L)	RL	MDL	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	7.66	1.71		IS	13C3-PFBS	112	60 - 150	
PFHpA	ND	7.66	0.566		IS	13C4-PFHpA	87.6	60 - 150	
PFHxS	ND	7.66	0.907		IS	18O2-PFHxS	91.0	60 - 150	
PFOA	ND	7.66	0.624		IS	13C2-PFOA	88.3	60 - 150	
PFOS	ND	7.66	0.773		IS	13C8-PFOS	93.0	60 - 150	
PFNA	ND	7.66	0.776		IS	13C5-PFNA	89.8	50 - 150	

MDL - Method detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to MDL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Matrix Spike Results

Modified EPA Method 537

Source Client ID:	GW-FPC-3A	QC Batch:	B6L0076	Lab Sample:	B6L0076-MS1/B6L0076-MSD1
Source LabNumber:	1601554-03	Date Extracted:	14-Dec-2016 9:47	Date Analyzed:	19-Dec-16 19:37 Column: BEH C18
Matrix:	Aqueous				19-Dec-16 19:49 Column: BEH C18
Sample Size:	0.124/0.121 L				

Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	RPD	MSD Qual.	%R Limit	%RPD Limit		Labeled Standard	MS %R	MS Qualifiers	MSD %R	MS Qual.
PFBS	80.7	103		82.7	112	8.37		60 - 130	20	IS	13C3-PFBS	110		114	
PFHpA	80.7	106		82.7	122	14.0		70 - 130	20	IS	13C4-PFHpA	91.3		87.7	
PFHxS	80.7	130		82.7	127	2.33		70 - 130	20	IS	18O2-PFHxS	93.5		94.6	
PFOA	80.7	109		82.7	126	14.5		70 - 130	20	IS	13C2-PFOA	89.6		90.4	
PFOS	80.7	**131**	H	82.7	**139**	5.93	H	70 - 130	20	IS	13C8-PFOS	96.5		92.6	
PFNA	80.7	96.3		82.7	103	6.72		50 - 130	20	IS	13C5-PFNA	92.5		91.4	

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: GW-FPC-3B

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Eastern Analytical, Inc.	Matrix:	Aqueous	Lab Sample:	1601554-04	Date Received:	13-Dec-2016 10:33
Project:	163786 NH 2433	Sample Size:	0.124 L	QC Batch:	B6L0076	Date Extracted:	14-Dec-2016 9:47
Date Collected:	08-Dec-2016 13:30			Date Analyzed:	19-Dec-16 19:00 Column: BEH C18		

Analyte	Conc. (ng/L)	RL	MDL	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	8.04	1.80		IS	13C3-PFBS	106	60 - 150	
PFHpA	ND	8.04	0.594		IS	13C4-PFHpA	84.4	60 - 150	
PFHxS	ND	8.04	0.951		IS	18O2-PFHxS	93.0	60 - 150	
PFOA	ND	8.04	0.654		IS	13C2-PFOA	93.3	60 - 150	
PFOS	1.00	8.04	0.811	J	IS	13C8-PFOS	94.2	60 - 150	
PFNA	ND	8.04	0.814		IS	13C5-PFNA	88.6	50 - 150	

MDL - Method detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to MDL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: GW-FPC-3B-Dup

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Eastern Analytical, Inc.	Matrix:	Aqueous	Lab Sample:	1601554-05	Date Received:	13-Dec-2016 10:33
Project:	163786 NH 2433	Sample Size:	0.125 L	QC Batch:	B6L0076	Date Extracted:	14-Dec-2016 9:47
Date Collected:	08-Dec-2016 13:30			Date Analyzed:	19-Dec-16 19:12 Column: BEH C18		

Analyte	Conc. (ng/L)	RL	MDL	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	8.00	1.79		IS	13C3-PFBS	109	60 - 150	
PFHpA	ND	8.00	0.591		IS	13C4-PFHpA	86.8	60 - 150	
PFHxS	ND	8.00	0.947		IS	18O2-PFHxS	85.7	60 - 150	
PFOA	ND	8.00	0.651		IS	13C2-PFOA	78.5	60 - 150	
PFOS	ND	8.00	0.807		IS	13C8-PFOS	98.6	60 - 150	
PFNA	ND	8.00	0.810		IS	13C5-PFNA	97.3	50 - 150	

MDL - Method detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to MDL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: GW-FPC-3C

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	Eastern Analytical, Inc.	Matrix:	Aqueous	Lab Sample:	1601554-06	Date Received:	13-Dec-2016 10:33
Project:	163786 NH 2433	Sample Size:	0.126 L	QC Batch:	B6L0076	Date Extracted:	14-Dec-2016 9:47
Date Collected:	08-Dec-2016 15:43			Date Analyzed:	19-Dec-16 19:24 Column: BEH C18		

Analyte	Conc. (ng/L)	RL	MDL	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	7.96	1.78		IS	13C3-PFBS	105	60 - 150	
PFHpA	ND	7.96	0.588		IS	13C4-PFHpA	82.5	60 - 150	
PFHxS	1.40	7.96	0.942	J	IS	18O2-PFHxS	88.6	60 - 150	
PFOA	1.83	7.96	0.648	J	IS	13C2-PFOA	77.2	60 - 150	
PFOS	0.976	7.96	0.803	J	IS	13C8-PFOS	94.1	60 - 150	
PFNA	ND	7.96	0.806		IS	13C5-PFNA	87.6	50 - 150	

MDL - Method detection limit
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
Results reported to MDL.
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The associated compound concentration exceeded the calibration range of the instrument.
H	Recovery and/or RPD was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Reporting Limit/LOQ.
M	Estimated Maximum Possible Concentration. (CA Region 2 projects only)
*	See Cover Letter
Conc.	Concentration
NA	Not applicable
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-004
Pennsylvania Department of Environmental Protection	012
South Carolina Department of Health	87002001
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	7923
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	**Method**
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23

MATRIX: Biological Tissue	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	**Method**
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537

MATRIX: Non-Potable Water	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	**Method**
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope	EPA 1613B

Dilution GC/HRMS	
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

CHAIN-OF-CUSTODY RECORD

eastern analytical
professional laboratory services

1601554 1.4°C

EAI ID# **163786** Page 1

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
GW-EB-Water Level	12/8/2016 9:45	aqueous	Subcontract - Perfluorinated Compounds EPA Method 537 (VAL)	
FB-DI Water	12/8/2016 9:30	aqueous	Subcontract - Perfluorinated Compounds EPA Method 537 (VAL)	
GW-FPC-3A	12/8/2016 14:30	aqueous	Subcontract - Perfluorinated Compounds EPA Method 537 (VAL)	
GW-FPC-3B	12/8/2016 13:30	aqueous	Subcontract - Perfluorinated Compounds EPA Method 537 (VAL)	

EAI ID# **163786** Project State: NH

Project ID: 2433

Company Vista Analytical Laboratory
Address 1104 Windfield Way
Address El Dorado Hills, CA 95762
Account #
Phone # (916) 673-1520
Fax Number

Results Needed by: Preferred date
QC Deliverables
☐ A ☐ A+ ☐ B ☐ B+ ☒ C ☐ P

Notes about project:
Email pdf of results and invoice to customerservice@eailabs.com.
GW-FPC-3A needs MS/MSD
Report to MDL
6 Compound PFC list - PFBS, PFHpA, PFHxS, PFOA, PFNA, PFOS

PO #:45557 EAI ID# **163786**

Please call prior to analyzing, if RUSH surcharges will be applied.

Samples Collected by:

Relinquished by	Date/Time	Received by
[signature]	12/12/16 15:30	UPS
UPS	12/13/16 1038	[signature]

Relinquished by Date/Time Received by

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 Fax: (603)228-4591

As a subcontract lab to EAI, you will defend, indemnify and hold Eastern Analytical, Inc., its officers, employees, and agents harmless from and against any and all liability, loss, expense or claims for injury or damages arising out of the performance against this chain of custody but only in proportion to and to the extent such liability, loss, expense, or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of you as a subcontract lab, your officers, agents or employees

CHAIN-OF-CUSTODY RECORD

eastern analytical
professional laboratory services

1601554

EAI ID# 163786

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
GW-FPC-3B-Dup	12/8/2016 13:30	aqueous	Subcontract - Perfluorinated Compounds EPA Method 537 (VAL)	
GW-FPC-3C	12/8/2016 15:43	aqueous	Subcontract - Perfluorinated Compounds EPA Method 537 (VAL)	

EAI ID# 163786 **Project State:** NH
Project ID: 2433

Company Vista Analytical Laboratory
Address 1104 Windfield Way
Address El Dorado Hills, CA 95762
Account #
Phone # (916) 673-1520
Fax Number

Results Needed by: Preferred date
QC Deliverables
☐ A ☐ A+ ☐ B ☐ B+ ☒ C ☐ P

Notes about project:
Email pdf of results and invoice to customerservice@eailabs.com.

GW-FPC-3A needs MS/MSD
Report to MDL
6 Compound PFC list - PFBS, PFHpA, PFHxS, PFOA, PFNA, PFOS

PO #: 45557 **EAI ID# 163786**

Please call prior to analyzing, if RUSH surcharges will be applied.

Samples Collected by: ______

Relinquished by	Date/Time	Received by
[signature]	12/12/16 1530	UPS
UPS	12/13/16 1038	MSparks

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 Fax: (603)228-4591

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1601554 TAT 8?d

Samples Arrival:	Date/Time 12/13/16 1033	Initials: IWS	Location: WR-2 Shelf/Rack: N/A
Logged In:	Date/Time 12/13/16 1044	Initials: BSB	Location: WR-2 Shelf/Rack: E7

Delivered By:	FedEx	UPS	On Trac	DHL	Hand Delivered	Other

Preservation:	Ice	Blue Ice	Dry Ice	None

Temp °C: 1.7 (uncorrected)	Time: 1036	Thermometer ID: IR-1
Temp °C: 1.4 (corrected)	Probe used: Yes☐ No☒	

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill Trk # 1Z X46 599 01 9474 2179	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓	~~BSB~~	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

Preservation Documented:	$Na_2S_2O_3$	Trizma	Yes	No	NA
Shipping Container	Vista	Client	Retain	Return	Dispose

Comments: Hand written Sample labels : GW-EB-Water level A/B bottle
FB DI Water
* GW-FPC-3B A/B bottle
* GW-FPC-3B MS
* GW-FPC 3B MSD A/B bottles
GW-FPC-3B A/B bottles
GW-FPC-3B Dup
GW-FPC-3C

* Pink label ID: GW-FPC-3A

BLA 09.06.2016

L:\QA\Forms\sample control\Sample LoginNov-2016 (IR-1) F11.1
L:\Controlled Forms\Sample LoginNov-2016 (IR-1) F11.1

Chain of Custody Anomaly/Sample Acceptance Form

Vista
Analytical Laboratory

Client:	Eastern Analytical, Inc.	Workorder Number:	1601554
Contact:	Jennifer Laramie	Date Received:	13-Dec-16 10:33
Email:	JenniferL@eailabs.com	Documented by/date:	B.Benedict 12/13/2016
Phone:	(603) 410-3881		

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
mmaier@vista-analytical.com
916-673-1520

The following information or item is needed to proceed with analysis:

- [ ] Complete Chain-of-Custody
- [ ] Test Method Requested
- [ ] Analyte List Requested
- [ ] Other:
- [ ] Preservative
- [ ] Sample Identification
- [ ] Sample Collection Date and/or Time
- [ ] Collector's Name
- [ ] Sample Type
- [ ] Sample Location

The following anomalies were noted. Authorization is needed to proceed with analysis.

- [ ] Temperature outside < 6°C Range Samples Affected: ____________

Temperature ______ °C Ice Present? Yes No Melted

- [X] Sample ID Discrepancy: **See Comments**
- [ ] Sample Holding Time Missed
- [ ] Custody Seals Broken
- [ ] Insufficient Sample Size
- [ ] Sample Container(s) Broken
- [ ] Incorrect Container Type

Comments:

COC ID:	Hand written ID:	Pink label:
GW-FPC-3A	GW-FPC-3B	GW-FPC-3A

Client Authorization

Proceed with Analysis: YES NO Signature and Date Karen Fogg 12/13/16

Client Comments/Instructions Per client, log in sample using the sample ID on the COC.

Page ______ of ______

Chain-of-Custody Record

163786

Bold Fields Required. Please Circle Requested Analysis.

Sample I.D.	Sampling Date/Time *If Composite, Indicate Both Start & Finish Date/Time	Matrix (see below)	Grab/*Composite	VOC: 524.2 / 524.2 BTEX / 524.2 MTBE only	VOC: 8260B / 624 / VTICs / 1,4 Dioxane	VOC: ~~8021B BTEX HALOS~~ 1,4 Dioxane	VOC: 8015B GRO / MAVPH	SVOC: 8270D / 625 / SVTICs / EDB / DBCP / ABN / A / BN / PAH	SVOC: TPH8100 / L1 / L2	SVOC: 8015B DRO / MAEPH	SVOC: PEST 608 / PCB 608 / PEST 8081A / PCB 8082	SVOC: Oil & Grease 1664 / TPH 1664	TCLP: TCLP 1311 / ABN / Metals / VOC / Pest / Herb	Metals: Dissolved Metals (List Below)	Metals: Total Metals (List Below)	Inorganics: TS / TSS / TDS / Spec. Con.	Inorganics: Br / Cl / F / SO_4 / NO_2 / NO_3 / NO_3NO_2	Inorganics: BOD / CBOD / T. Alk.	Inorganics: TKN / NH_3 / T. Phos. / O. Phos.	Inorganics: pH / T. Res. Chlorine	Inorganics: COD / Phenols / TOC / DOC	Inorganics: Total Cyanide / Total Sulfide	Inorganics: Reactive Cyanide / Reactive Sulfide / Flashpoint / Ignitability	Micro: Total Coliform / E. Coli / Fecal Coliform	Micro: Enterococci / Heterotrophic Plate Count	Other: GW Metals-Total	Other: Mod. EPA 537	Other	# of Containers	Notes MeOH Vial #
GW-EB-Water Level	12/9/16 0945	GW	G		X	X																				X	X		7	
FB-DEWATER	0930				X	X																				X	X		7	
GW-FPC-3A	1430				X	X																				X	X		7	
GW-FPC-3A-MS	1430				X	X																				X	X		7	
GW-FPC-3A-MSD	1430				X	X																				X	X		7	
GW-FPC-3B	1330				X	X																				X	X		7	
GW-FPC-3B-DUP	1330				X	X																				X	X		7	
GW-FPC-3C	1543				X	X																				X	X		7	
Trip Blank 8260	0930				X																								2	
Trip Blank 1,4 dioxane	0930					X																							2	
Matrix: A-Air; S-Soil; GW-Ground Water; SW-Surface Water; DW-Drinking Water; WW-Waste water																														
Preservative: H-HCL; N-HNO_3; S-H_2SO_4; Na-NaOH; M-MEOH					H																					N				

Project Manager: Michael Deyling

Company: CES

Address: 640 Main St

City: Lewiston State: ME Zip: 04240

Phone: 2077956009 Ext.:

Fax:

E-mail: mdeyling@ces-maine.com

Site Name: Coakley Landfill

Project #: 10424

State: NH MA ME VT Other:

Regulatory Program: NPDES: RGP POTW Stormwater or GWP, Oil Fund, Brownfield or Other: GWP/Superfund

Quote #: PO #:

Date Needed:

QA/QC Reporting Level A B C OR Presumptive Certainty

Reporting Options Prelims: Yes or No If Yes: Fax or PDF

Electronic Options No Fax E-mail PDF Equis

Temp. 2.0 °C AUB

ICE? Yes No

Sampler(s): Wesley Harden

Relinquished By:	Date:	Time:	Received By:
[signature]	12/9/16	11:32	[signature]
[signature]	12.9.16	14:15	[signature]

Metals: 8 RCRA 13 PP Fe, Mn Pb, Cu

Other Metals:

Samples Field Filtered? ☐ Yes ☐ No

Notes: (ie: Special Detection Limits, Billing Info, If Different)
GW Metals - Sb, As, Ba, Be, Ca, Cr, Fe, Pb, Mg, Mn, Ni, K, Na, V
Modified EPA 537:
PFBS, PFHpA, PFHxS
PFOA, PFNA, PFOS

Site History:

Suspected Contamination:

Field Readings:

Eastern Analytical, Inc.
professional laboratory & drilling services

25 Chenell Drive | Concord, NH 03301 | Tel: 603.228.0525 | 1.800.287.0525 | Fax: 603.228.4591 | E-mail: customerservice@eailabs.com | www.eailabs.com

(White: Original Green: Project Manager)

1,4 D in trip blanks with deta ... 1 Bottle

Eastern Analytical, Inc.

Professional laboratory & drilling services

EAI SAMPLE CONDITIONS PAGE
EAI SRB

163786

Received via: other:

- [x] EAI Courier
- [ ] UPS
- [ ] FedEx
- [ ] Customer D/O
- [ ] Custody Seal
- [ ] US Postal
- [ ] EAI Employee
- [ ] Field Services
- [ ] Other

Unpacked by: AWB
Date: DEC 09 2016

Samples Labeled by (Costar): AWB

Preservation checked by: AWB **Date:** DEC 09 2016 **Delivered to lab by:** AWB **Date:** DEC 09 2016

Analysis	Preservation			Preservative added? Select all applicable.	Sample Storage	
Metals	HNO3: pH<2	F	L	☐ Container received unpreserved	Rec Lab-1	
Dissolved Analysis:	Filtering:	F	L	☐ Sample matrix interference	VOA Lab-1	X
DOC / TOC:	H3PO4: pH<2	F	L	☐ Sample split / transferred	VOA Lab-2	
Phenols:	H2SO4: pH<2	F	L	☐ Sample filtered by EAI	Ext Lab-1	
NH3 / TKN / COD / PO4:	H2SO4: pH<2	F	L	☐ Other -	Ext Lab SOC	
Sulfide / Cyanide:	NaOH: pH>11	F	L		Wet Lab P-1	
525 / EPH / DRO:	HCl: pH<2	F	L		Wet Lab U-1	
Method 5035 VOC (soils):	Methanol	F	L	Syringe MeOH Vial Additional Jar	Soils-1	
BOD / Uranium / Other :	Sample Split	Y	N		Metal Shelf	X

Subcontracted Samples: Stored in Rec Lab Fridge: Y N

Shipped Via: EAI Courier UPS FedEx Other Courier EAI Employee **Subbed By:** AWB **Sub Date:** 12/12/16

Sub Lab: NHDES Phoenix Aquarian KNL Seacoast ALS-NY ALS-TX ALS-CA EMSL Sterling Summit PSC Optimum Anlyt. Svcs. Maine Env. N.E.Bio Frontier A.W.C.L. U-MAINE Alpha Southern Other: Vista

Customer Communication / Sample Issues - Include customer and date contacted.

VOC Trip Blank - Y / N / NA Date: 11/4/16 Time: 16:00	per phone call with Wesley
1,4D Trip Blank - Y / N / NA Date: 11/4/16 Time: 15:00	Harden containers were mislabeled
EDB Trip Blank - Y / N / NA Date:	with 3B instead of 3A. Samples
Sample GW-FPC-3A on COC was labeled	should be 3A. Also sample vial
GW-FPC-3B on containers	that was mislabeled as 3B Dup
Sample GW-FPC-3A-MS on COC was	should be GW-FPC-3D - AWB
labeled GW-FPC-3B-MS on containers	12/9/16 16:15
Sample GW-FPC-3A-MSD on COC	
was labeled GW-FPC-3B-MSD on containers	
one vial for GW-FPC-3B was labeled	
GW-FPC-3B Dup on container	
sent email to confirm - AWB 12/9/16	

8260B

Initial Calibration

IS/SS ID= V-4530
Analyst: BRL
Standard ID= V-4525
Gas Standard ID= V-4526
Date: 12/13/16
LCS/LCSD and/or MS/MSD Standard ID= V-4514 4522

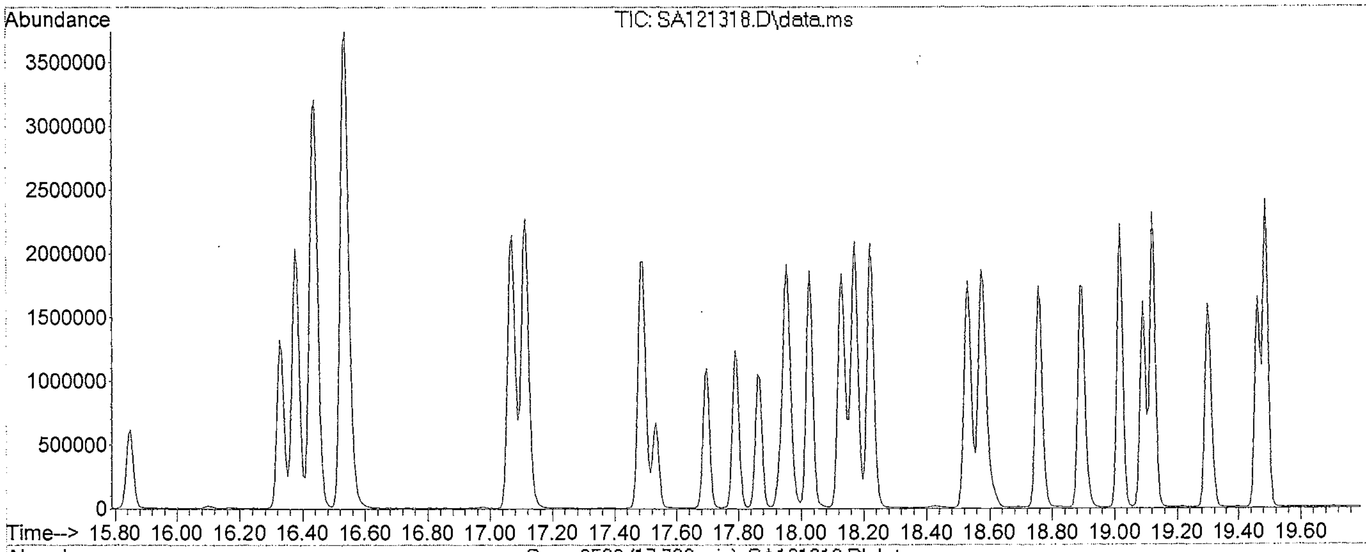
ALS	Data File	Sample Name	RR	AQ	SO	Dilution	Aq Meth	An Meth	Comments	pH<2	A
1	5B121301	BFB 25ng					VOCMS	4V10 1213			✓
2	02	STD 0.2					VOCMS				✓
3	03	STD 0.5					VOCMS				✓
4	04	STD 1.0					VOCMS				✓
5	05	STD 2.0					VOCMS				✓
6	06	STD 5.0					VOCMS				✓
7	07	STD 10					VOCMS				✓
8	08	STD 20					VOCMS				✓
9	09	STD 50					VOCMS				✓
10	10	STD 100					VOCMS				✓
11	11	Blank					VOCMS				
12	12	STD 200					VOCMS				✓
13	13	Blank					VOCMS				
14	14	STD300					VOCMS				✓
15	15	Blank					VOCMS				
16	16	Blank					VOCMS				
17	17	LCS		✓			VOCMS				✓
18	18	STD 20					VOCMS				✓
19	19	LCS		✓			VOCMS				✓
20	20	LCSD		✓			VOCMS				✓
21	21	STD 2					VOCMS				✓
22	22	Blk		✓			VOCMS				✓
23	23	163786.01		✓		1	VOCMS			✓	✓
24	24	.02		✓		1	VOCMS			✓	✓
25	25	.03		✓		1	VOCMS			✓	✓
26	26	.04		✓		1	VOCMS			✓	✓
27	27	.05		✓		1	VOCMS			✓	✓
28	28	.06		✓		1	VOCMS			✓	✓
29	29	.07		✓		1	VOCMS			✓	✓
30	30	163804.07		✓		1	VOCMS			✓	✓
31	31	MS		✓		1	VOCMS		P= 163786.03	✓	✓
32	32	MSD		✓		1	VOCMS		↓	✓	✓
33	33	Blk		✓			VOCMS				
34	34	Blk		✓			VOCMS				
35	35	163824.01		✓		1	VOCMS			7	✓
36	36	.02		✓		1	VOCMS			7	✓
							VOCMS				
							VOCMS				
							VOCMS				
							VOCMS				
							VOCMS		BRL 12/14/16		
							VOCMS				
							VOCMS				
							VOCMS				
							VOCMS				
							VOCMS				

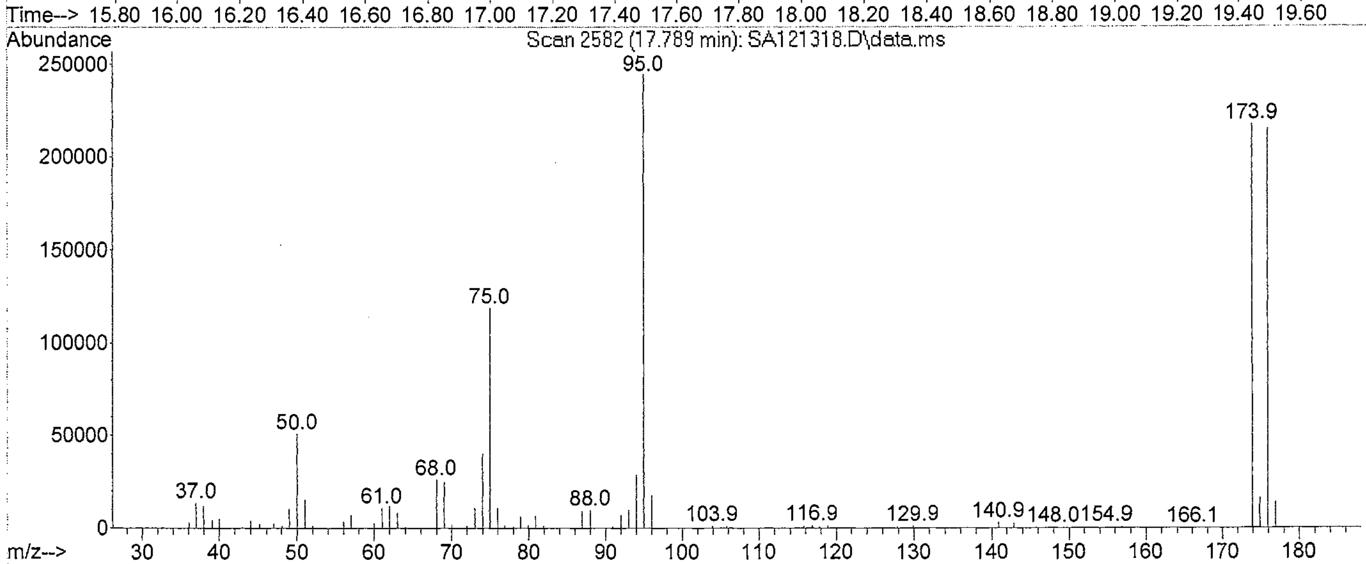
Samples removed from autosampler, order and pH verified by BRL 12/14/16

Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Data File : SA121318.D
Acq On : 13 Dec 2016 18:09
Operator :
Sample : STD 20
Misc : X1; 5mL;
ALS Vial : 18 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\2015\4VID1213.M
Title : 8260/624
Last Update : Wed Dec 14 07:58:38 2016





Spectrum Information: Scan 2582

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.8	50792	PASS
75	95	30	60	48.6	118720	PASS
95	95	100	100	100.0	244416	PASS
96	95	5	9	7.3	17800	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	88.8	217152	PASS
175	174	5	9	7.4	16062	PASS
176	174	95	101	99.0	214912	PASS
177	176	5	9	6.5	13917	PASS

Response Factor Report VOAMS4

Method Path : C:\msdchem\1\methods\2015\
Method File : 4VID1213.M
Title : 8260/624
Last Update : Wed Dec 14 07:58:38 2016
Response Via : Initial Calibration

Calibration Files
0.2 =SA121302.D 0.5 =SA121303.D 1.0 =SA121304.D 2.0 =SA121305.D 5.0 =SA121306.D 10 =SA121307.D 20 =SA121308.D
50 =SA121309.D 100 =SA121310.D 200 =SA121312.D 300 =SA121314.D

		Compound	0.2	0.5	1.0	2.0	5.0	10	20	50	100	200	300	Avg	%RSD
1)	I	Fluorobenzene IS	----------------ISTD----------------------												
2)		dichlorodifluo...	0.248	0.294	0.226	0.270	0.244	0.214	0.213	0.214	0.241	0.249	0.219	0.239	10.81
3)	P	chloromethane		0.306	0.250	0.259	0.254	0.235	0.228	0.220	0.207	0.228	0.255	0.244	11.35
4)	C	vinyl chloride	0.307	0.248	0.192	0.209	0.211	0.184	0.183	0.151	0.139			0.203	24.97#
5)		bromomethane		0.072	0.049	0.059	0.063	0.064	0.061	0.082	0.082	0.087	0.092	0.071	19.64
6)		chloroethane		0.115	0.115	0.103	0.132	0.108	0.126	0.124	0.118	0.115	0.116	0.117	7.10
7)		trichlorofluor...	0.342	0.363	0.309	0.336	0.349	0.300	0.314	0.307	0.323	0.316	0.293	0.323	6.79
8)		diethyl ether	0.198	0.173	0.197	0.186	0.201	0.192	0.199	0.193	0.178	0.174	0.180	0.188	5.47
9)		1,1,2-Trichlor...	0.143	0.160	0.123	0.153	0.138	0.122	0.125	0.125	0.140	0.139	0.123	0.136	9.66
10)		acrolein			0.034	0.031	0.027	0.030	0.030	0.034	0.033	0.028	0.027	0.030	8.78
11)		acetone		0.133	0.102	0.116	0.107	0.112	0.118	0.114	0.102			0.113	9.00
12)	MC	1,1-dichloroet...	0.148	0.160	0.158	0.154	0.170	0.165	0.160	0.165	0.165	0.159	0.157	0.160	3.76
13)	*	tert-Butyl Alc...		0.014	0.018	0.018	0.015	0.016	0.016	0.019	0.020	0.020	0.020	0.018	12.58
14)		iodomethane			0.031	0.028	0.046	0.058	0.085	0.117	0.113	0.104	0.096	0.075	46.71
15)		methylene chlo...	0.398	0.315	0.232	0.201	0.222	0.216	0.202	0.198	0.186	0.180	0.184	0.230	29.06
16)		carbon disulfide	0.749	0.623	0.648	0.599	0.652	0.644	0.619	0.605	0.593	0.557	0.541	0.621	8.91
17)		acrylonitrile			0.071	0.094	0.091	0.086	0.089	0.087	0.082	0.080	0.079	0.084	8.39
18)	*	Methyl-t-butyl...	0.443	0.424	0.442	0.409	0.434	0.426	0.433	0.436	0.423	0.398	0.403	0.425	3.58
19)		trans-1,2-dich...	0.241	0.193	0.215	0.199	0.218	0.216	0.218	0.214	0.206	0.193	0.196	0.210	6.80
20)		hexane	0.239	0.275	0.199	0.261	0.215	0.189	0.196	0.193	0.241	0.241		0.225	13.59
21)		Isopropyl ethe...	0.718	0.720	0.769	0.679	0.763	0.761	0.765	0.770	0.721	0.671	0.671	0.728	5.53
22)		vinyl acetate	0.264	0.247	0.239	0.234	0.258	0.308	0.374	0.443	0.453	0.434	0.445	0.336	27.87
23)	P	1,1-dichloroet...	0.385	0.367	0.388	0.360	0.405	0.401	0.396	0.399	0.382	0.356	0.359	0.382	4.80
24)		Ethyl-t-butyl ...	0.360	0.325	0.341	0.303	0.321	0.322	0.340	0.379	0.429	0.444	0.499	0.369	16.80
25)		2,2-dichloropr...	0.126	0.109	0.098	0.086	0.101	0.110	0.124	0.171	0.217	0.236	0.261	0.149	41.55
26)		cis-1,2-dichlo...	0.224	0.225	0.242	0.224	0.241	0.244	0.236	0.238	0.226	0.212	0.215	0.230	4.89
27)		2-butanone(MEK)		0.155	0.117	0.136	0.123	0.137	0.147	0.151	0.142	0.142	0.140	0.139	8.33
28)		bromochloromet...	0.112	0.108	0.116	0.108	0.120	0.119	0.117	0.116	0.110	0.103	0.104	0.112	5.30
29)		Tetrahydrofura...		0.076	0.069	0.061	0.068	0.066	0.068	0.069	0.069	0.065	0.066	0.068	5.86
30)	C	chloroform	0.411	0.386	0.400	0.377	0.409	0.407	0.400	0.401	0.375	0.350	0.351	0.388	5.72#
31)	S	SS dibromofluo...	0.280	0.282	0.286	0.280	0.287	0.287	0.287	0.286	0.285	0.284	0.284	0.284	0.89
32)		1,1,1-trichlor...	0.215	0.198	0.195	0.181	0.208	0.220	0.236	0.270	0.292	0.289	0.292	0.236	17.90
33)		carbon tetrach...	0.133	0.123	0.126	0.125	0.147	0.159	0.177	0.216	0.246	0.249	0.248	0.177	29.76
34)		1,1-dichloropr...	0.302	0.283	0.278	0.269	0.301	0.299	0.290	0.289	0.290	0.273	0.265	0.285	4.50
35)	S	SS 1,2-DCA-d4_MS	0.340	0.345	0.347	0.346	0.348	0.340	0.345	0.346	0.337	0.332	0.333	0.342	1.60
36)		tert-amyl meth...	0.322	0.307	0.295	0.279	0.302	0.323	0.370	0.437	0.467	0.463	0.486	0.369	21.56
37)	M	benzene	0.937	0.831	0.862	0.812	0.883	0.864	0.842	0.818	0.748	0.665	0.636	0.809	11.30
38)		1,2-dichloroet...	0.374	0.348	0.353	0.332	0.349	0.346	0.341	0.333	0.306	0.283	0.282	0.332	8.91
39)	M	trichloroethene	0.253	0.218	0.218	0.208	0.229	0.227	0.220	0.219	0.211	0.196	0.193	0.217	7.60
40)	C	1,2-dichloropr...	0.220	0.206	0.219	0.201	0.221	0.226	0.227	0.230	0.216	0.202	0.201	0.215	5.11#
41)	*	1,4-dioxaneV					0.002	0.003	0.003	0.003	0.003	0.003	0.003	0.003	6.19
42)		dibromomethane	0.144	0.136	0.151	0.142	0.149	0.154	0.153	0.149	0.140	0.131	0.130	0.144	5.97

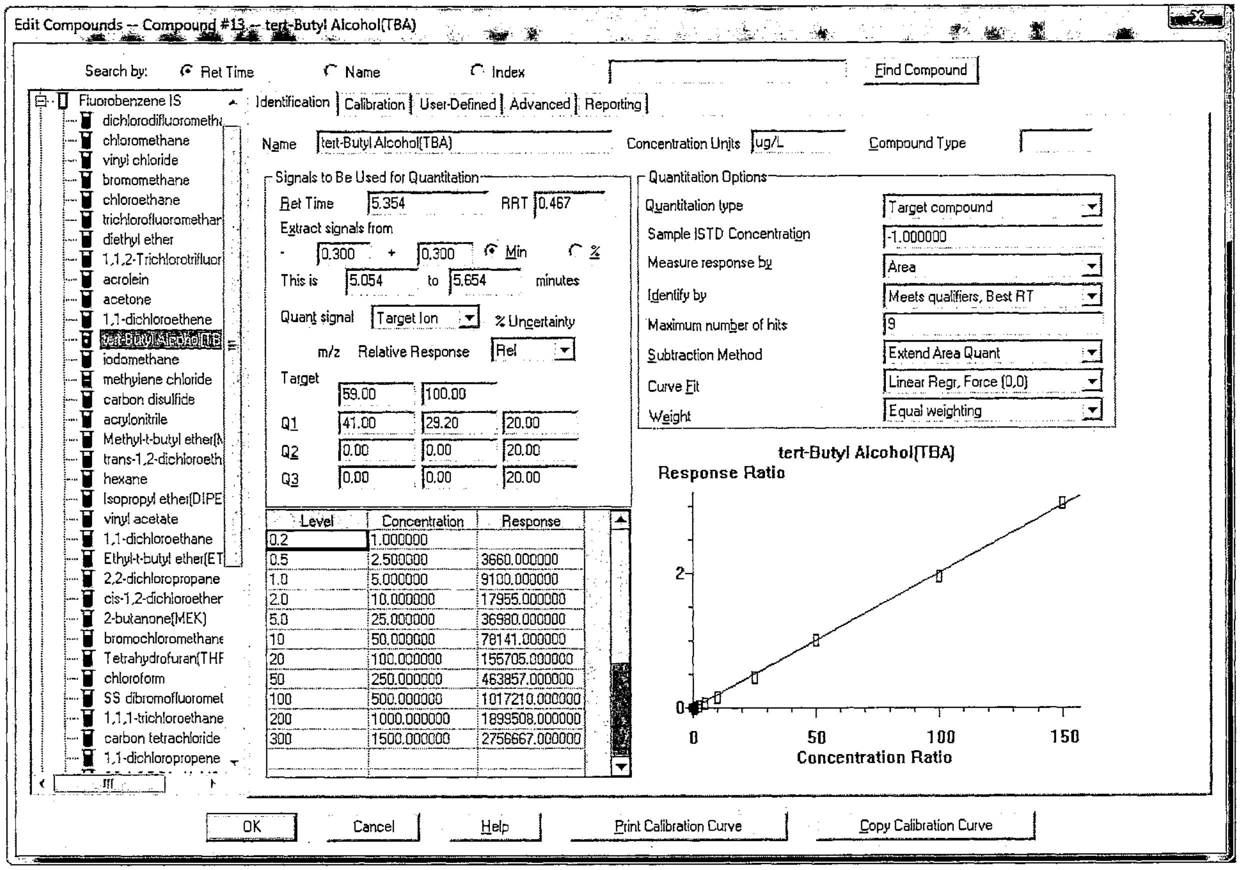
* See attached for concentrations in calibration

Response Factor Report VOAMS4

Method Path : C:\msdchem\1\methods\2015\
Method File : 4VID1213.M
Title : 8260/624

43)		bromodichlorom...	0.248	0.249	0.240	0.216	0.253	0.259	0.264	0.275	0.263	0.247	0.249	0.251	6.05
44)		2-Chloroethoxy...	0.068	0.059	0.059	0.054	0.062	0.058	0.054	0.050	0.046	0.045	0.047	0.055	13.43
45)		4-methyl-2-pen...		0.062	0.064	0.067	0.073	0.078	0.088	0.093	0.090	0.086	0.086	0.079	14.86
46)		cis-1,3-dichlo...	0.204	0.193	0.199	0.190	0.216	0.246	0.274	0.317	0.311	0.288	0.282	0.247	19.77
47)	I	Chlorobenzene-D5 IS	----------------ISTD--------------------												
48)	S	SS Toluene-d8_MS	1.287	1.301	1.289	1.308	1.295	1.302	1.294	1.303	1.270	1.302	1.305	1.296	0.83
49)	MC	toluene	1.140	1.089	1.126	1.071	1.139	1.143	1.088	1.035	0.898	0.763		1.049	11.88
50)		trans-1,3-dich...	0.168	0.169	0.163	0.154	0.191	0.230	0.293	0.368	0.373	0.359	0.351	0.256	36.34
51)		1,1,2-trichlor...	0.224	0.198	0.225	0.208	0.221	0.226	0.223	0.220	0.203	0.188	0.184	0.211	7.49
52)		2-hexanone	0.164	0.156	0.148	0.157	0.184	0.216	0.245	0.255	0.239	0.229	0.223	0.201	19.95
53)		tetrachloroethene	0.325	0.288	0.283	0.286	0.302	0.294	0.286	0.284	0.277	0.254	0.242	0.284	7.76
54)		1,3-dichloropr...	0.402	0.425	0.421	0.409	0.423	0.437	0.437	0.432	0.397	0.358	0.339	0.408	7.89
55)		dibromochlorom...	0.197	0.199	0.200	0.195	0.221	0.243	0.267	0.292	0.287	0.276	0.272	0.241	16.35
56)		1,2-dibromoethane	0.200	0.188	0.205	0.206	0.236	0.258	0.271	0.280	0.262	0.239	0.232	0.234	13.43
57)	MP	chlorobenzene	0.777	0.759	0.790	0.728	0.751	0.761	0.733	0.702	0.626	0.537	0.500	0.697	14.19
58)		1,1,1,2-tetrac...	0.166	0.145	0.154	0.147	0.178	0.197	0.221	0.248	0.240	0.225	0.221	0.195	19.64
59)	C	ethylbenzene	1.262	1.145	1.214	1.127	1.220	1.214	1.154	1.061	0.898	0.717		1.101	15.46#
60)	*	mp-xylene	0.457	0.436	0.448	0.425	0.462	0.465	0.445	0.422	0.370	0.313	0.286	0.412	14.96
61)		o-xylene	0.479	0.453	0.455	0.435	0.459	0.461	0.449	0.439	0.408	0.368	0.354	0.433	9.21
62)		styrene	0.730	0.743	0.798	0.753	0.804	0.814	0.798	0.762	0.668	0.571	0.528	0.724	13.31
63)	P	bromoform	0.138	0.121	0.127	0.124	0.140	0.154	0.179	0.210	0.209	0.201	0.200	0.164	22.15
64)		iso-propylbenzene	0.987	0.950	0.961	0.934	1.031	1.011	0.987	0.930	0.814	0.674	0.600	0.898	15.80
65)	S	SS 4-BFB_MS	0.498	0.500	0.507	0.514	0.506	0.510	0.505	0.503	0.499	0.503	0.506	0.505	0.99
66)	I	1,4-Dichlorobenzen...	----------------ISTD--------------------												
67)		bromobenzene	0.760	0.714	0.690	0.682	0.712	0.712	0.679	0.652	0.625	0.557	0.536	0.665	10.31
68)	P	1,1,2,2-tetrac...	0.627	0.623	0.659	0.653	0.668	0.694	0.697	0.678	0.659	0.569	0.527	0.641	8.19
69)		1,2,3-trichlor...	0.213	0.211	0.189	0.182	0.198	0.201	0.198	0.199	0.202	0.184	0.175	0.196	6.09
70)		t-1,4-dichloro...		0.078	0.076	0.072	0.082	0.086	0.090	0.100	0.112	0.106	0.104	0.091	15.51
71)		n-propylbenzene	2.330	2.163	2.211	2.165	2.319	2.359	2.226	2.061	1.873	1.486	1.279	2.043	17.46
72)		2-chlorotoluene	1.661	1.644	1.629	1.496	1.593	1.590	1.531	1.427	1.321	1.116	1.000	1.455	15.27
73)		4-chlorotoluene	1.820	1.704	1.712	1.598	1.710	1.676	1.617	1.502	1.373	1.124	1.023	1.532	16.77
74)		1,3,5-trimethy...	1.671	1.486	1.547	1.475	1.611	1.628	1.573	1.480	1.385	1.163	1.039	1.460	13.48
75)		tert-butylbenzene	1.291	1.254	1.210	1.176	1.280	1.284	1.241	1.196	1.140	0.996	0.902	1.179	10.61
76)		1,2,4-trimethy...	1.807	1.624	1.644	1.566	1.677	1.703	1.658	1.563	1.412	1.186	1.058	1.536	14.90
77)		sec-butylbenzene	1.895	1.592	1.661	1.603	1.752	1.760	1.701	1.589	1.467	1.220	1.066	1.573	15.42
78)		1,3-dichlorobe...	1.251	1.127	1.107	1.092	1.109	1.114	1.089	1.024	0.938	0.789	0.725	1.033	15.12
79)		p-isopropyltol...	1.534	1.405	1.421	1.365	1.488	1.510	1.464	1.400	1.301	1.096	0.970	1.359	13.02
80)		1,4-dichlorobe...	1.329	1.217	1.113	1.104	1.133	1.141	1.103	1.031	0.945	0.795	0.723	1.058	16.74
81)		1,2-dichlorobe...	1.103	1.125	1.123	1.040	1.102	1.099	1.072	0.998	0.911	0.762	0.696	1.003	14.96
82)		n-butylbenzene	1.474	1.223	1.180	1.161	1.242	1.291	1.240	1.185	1.100	0.922	0.826	1.168	14.95
83)	S	SS 1,2-DCB-d4_MS	0.966	0.993	0.979	0.970	0.956	0.979	0.985	0.967	0.983	0.965	0.967	0.974	1.12
84)		1,2-dibromo-3-...		0.064	0.048	0.052	0.063	0.084	0.109	0.129	0.141	0.128	0.125	0.094	38.02
85)		1,3,5-trichlor...	0.738	0.686	0.688	0.658	0.678	0.688	0.659	0.646	0.604	0.542	0.522	0.646	10.09
86)		1,2,4-trichlor...	0.705	0.620	0.615	0.585	0.605	0.620	0.613	0.598	0.571	0.516	0.503	0.596	9.14
87)		hexachlorobuta...		0.334	0.294	0.286	0.301	0.316	0.306	0.300	0.288	0.268	0.267	0.296	6.89
88)		naphthaleneV		1.191	1.228	1.276	1.296	1.350	1.381	1.381	1.338	1.131	1.020	1.259	9.37
89)		1,2,3-trichlor...	0.582	0.555	0.533	0.545	0.559	0.582	0.561	0.560	0.530	0.484	0.476	0.542	6.46
90)	S	SS 2,5-DBT_MS	0.241	0.186	0.185	0.179	0.185	0.190	0.194	0.204	0.207	0.205	0.215	0.199	8.92

(#) = Out of Range



Level	Concentration	Response
0.2	1.000000	
0.5	2.500000	3660.000000
1.0	5.000000	9100.000000
2.0	10.000000	17955.000000
5.0	25.000000	36980.000000
10	50.000000	78141.000000
20	100.000000	155705.000000
50	250.000000	463857.000000
100	500.000000	1017210.000000
200	1000.000000	1899508.000000
300	1500.000000	2756667.000000

Edit Compounds -- Compound #18 -- Methyl-t-butyl ether(MTBE)

Search by: (•) Ret Time ( ) Name ( ) Index [ ] Find Compound

Fluorobenzene IS
- dichlorodifluorometh
- chloromethane
- vinyl chloride
- bromomethane
- chloroethane
- trichlorofluoromethar
- diethyl ether
- 1,1,2-Trichlorotrifluor
- acrolein
- acetone
- 1,1-dichloroethene
- tert-Butyl Alcohol(TB
- iodomethane
- methylene chloride
- carbon disulfide
- acrylonitrile
- Methyl-t-butyl ether(
- trans-1,2-dichloroeth
- hexane
- isopropyl ether(DIPE
- vinyl acetate
- 1,1-dichloroethane
- Ethyl-t-butyl ether(ET
- 2,2-dichloropropane
- cis-1,2-dichloroether
- 2-butanone(MEK)
- bromochloromethane
- Tetrahydrofuran(THF
- chloroform
- SS dibromofluoromet
- 1,1,1-trichloroethane
- carbon tetrachloride
- 1,1-dichloropropene

Identification | Calibration | User-Defined | Advanced | Reporting

Name: Methyl-t-butyl ether(MTBE) Concentration Units: ug/L Compound Type: [ ]

Signals to Be Used for Quantitation

Ret Time: 6.358 RRT: 0.554

Extract signals from - 0.300 + 0.300 (•) Min ( ) %

This is 6.058 to 6.658 minutes

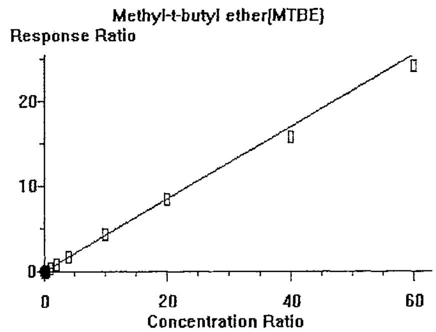
Quant signal: Target Ion % Uncertainty

	m/z	Relative Response	Rel
Target	73.00	100.00	
Q1	57.10	22.50	20.00
Q2	43.00	23.60	20.00
Q3	39.10	19.60	20.00

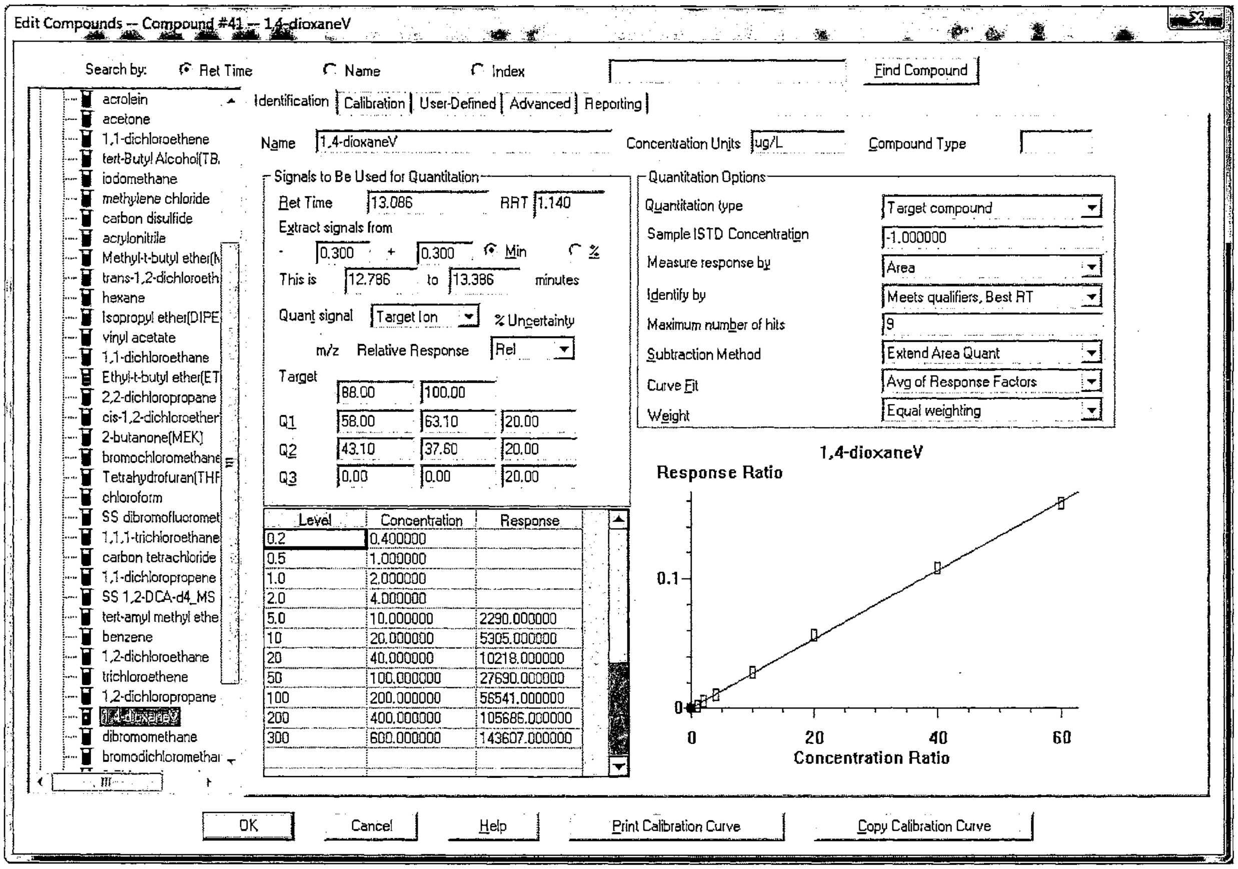
Quantitation Options

Quantitation type	Target compound
Sample ISTD Concentration	-1.000000
Measure response by	Area
Identify by	Meets qualifiers, Best RT
Maximum number of hits	9
Subtraction Method	Extend Area Quant
Curve Fit	Avg of Response Factors
Weight	Equal weighting

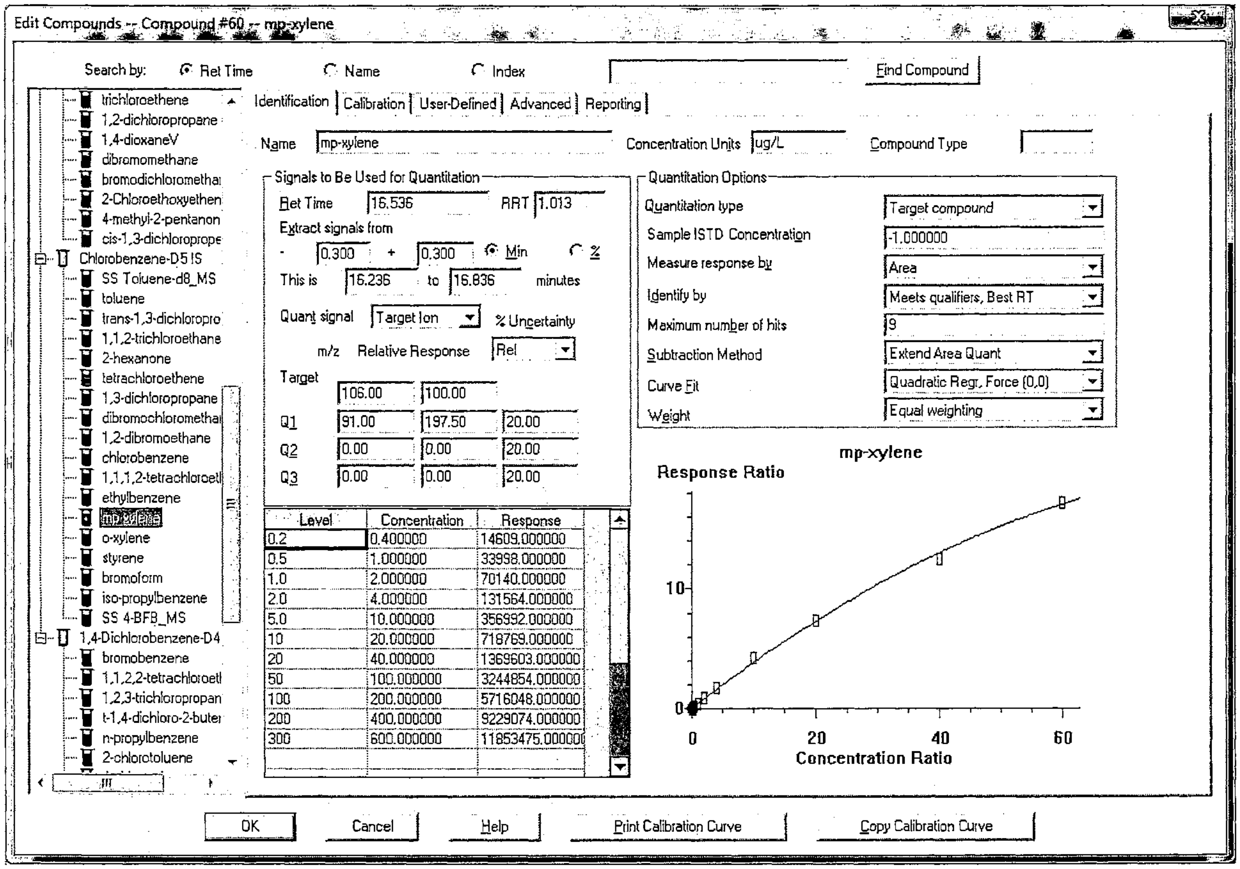
Level	Concentration	Response
0.2	0.400000	18054.000000
0.5	1.000000	43054.000000
1.0	2.000000	89294.000000
2.0	4.000000	164887.000000
5.0	10.000000	428404.000000
10	20.000000	853301.000000
20	40.000000	1712881.000000
50	100.000000	4346554.000000
100	200.000000	8517627.000000
200	400.000000	15447544.00000
300	600.000000	21922823.00000



OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve



Level	Concentration	Response
0.2	0.400000	
0.5	1.000000	
1.0	2.000000	
2.0	4.000000	
5.0	10.000000	2290.000000
10	20.000000	5305.000000
20	40.000000	10218.000000
50	100.000000	27690.000000
100	200.000000	56541.000000
200	400.000000	105686.000000
300	600.000000	143607.000000



Edit Compounds -- Compound #60 -- mp-xylene

Search by: Ret Time | Name | Index | Find Compound

Identification | Calibration | User-Defined | Advanced | Reporting

Name: mp-xylene — Concentration Units: ug/L — Compound Type

Signals to Be Used for Quantitation
Ret Time 16.536 RRT 1.013
Extract signals from - 0.300 + 0.300 Min %
This is 16.236 to 16.836 minutes
Quant signal: Target Ion — % Uncertainty
m/z — Relative Response — Rel

	m/z	Relative Response	% Uncertainty
Target	106.00	100.00	
Q1	91.00	197.50	20.00
Q2	0.00	0.00	20.00
Q3	0.00	0.00	20.00

Quantitation Options
Quantitation type: Target compound
Sample ISTD Concentration: -1.000000
Measure response by: Area
Identify by: Meets qualifiers, Best RT
Maximum number of hits: 9
Subtraction Method: Extend Area Quant
Curve Fit: Quadratic Regr, Force (0,0)
Weight: Equal weighting

Level	Concentration	Response
0.2	0.400000	14609.000000
0.5	1.000000	33998.000000
1.0	2.000000	70140.000000
2.0	4.000000	131564.000000
5.0	10.000000	356992.000000
10	20.000000	719769.000000
20	40.000000	1369603.000000
50	100.000000	3244854.000000
100	200.000000	5716048.000000
200	400.000000	9229074.000000
300	600.000000	11853475.00000

Compound List Report VOAMS4

Method Path : C:\msdchem\1\methods\2015\
Method File : 4VID1213.M
Title : 8260/624
Last Update : Wed Dec 14 07:58:38 2016
Response Via : Initial Calibration

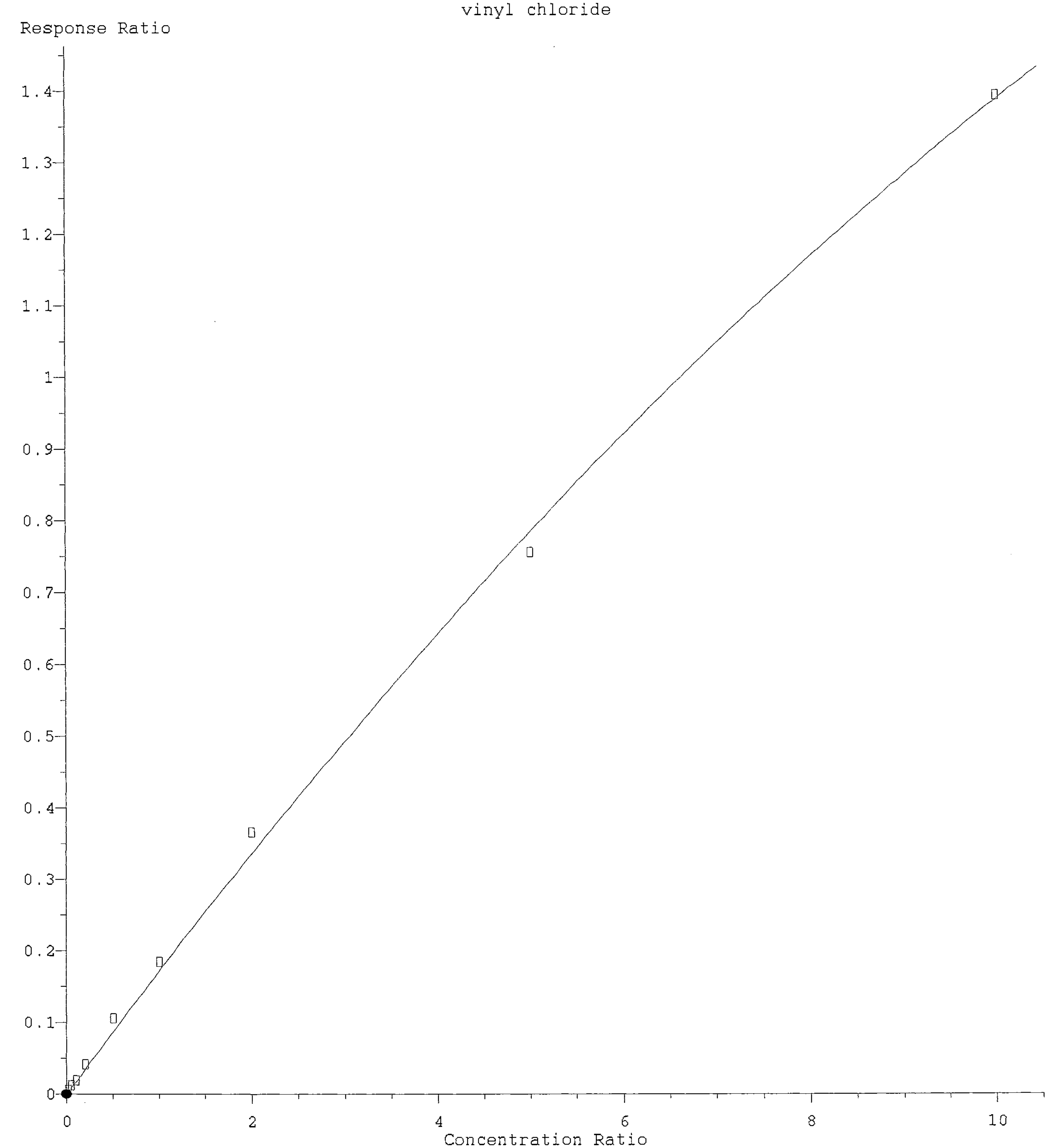
Total Cpnds : 90

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Fluorobenzene IS	96	11.474	1.000	A	2	A	B
2		dichlorodifluoromethane	85	2.617	0.228	A	2	A	B
3	P	chloromethane	50	2.933	0.256	A	1	A	B
4	C	vinyl chloride	62	3.061	0.267	QO	1	A	B
5		bromomethane	94	3.657	0.319	QO	1	A	B
6		chloroethane	64	3.766	0.328	A	2	A	B
7		trichlorofluoromethane	101	4.131	0.360	A	1	A	B
8		diethyl ether	59	4.600	0.401	A	2	A	B
9		1,1,2-Trichlorotrifluoroethane	101	4.825	0.421	A	2	A	B
10		acrolein	56	4.819	0.420	A	1	A	B
11		acetone	43	4.947	0.431	A	1	A	B
12	MC	1,1-dichloroethene	96	5.147	0.449	A	2	A	B
13		tert-Butyl Alcohol(TBA)	59	5.354	0.467	LO	1	A	B
14		iodomethane	142	5.719	0.498	QO	2	A	B
15		methylene chloride	84	6.054	0.528	LO	1	A	B
16		carbon disulfide	76	6.060	0.528	A	1	A	B
17		acrylonitrile	53	6.322	0.551	A	2	A	B
18		Methyl-t-butyl ether(MTBE)	73	6.358	0.554	A	3	A	B
19		trans-1,2-dichloroethene	96	6.626	0.577	A	2	A	B
20		hexane	57	6.753	0.589	A	3	A	B
21		Isopropyl ether(DIPE)	45	7.295	0.636	A	2	A	B
22		vinyl acetate	43	7.532	0.656	LO	1	A	B
23	P	1,1-dichloroethane	63	7.502	0.654	A	1	A	B
24		Ethyl-t-butyl ether(ETBE)	59	8.159	0.711	QO	2	A	B
25		2,2-dichloropropane	77	8.688	0.757	QO	1	A	B
26		cis-1,2-dichloroethene	96	8.791	0.766	A	2	A	B
27		2-butanone(MEK)	43	8.433	0.735	A	2	A	B
28		bromochloromethane	128	9.497	0.828	A	2	A	B
29		Tetrahydrofuran(THF)	42	9.601	0.837	A	2	A	B
30	C	chloroform	83	9.144	0.797	A	2	A	B
31	S	SS dibromofluoromethane_MS	111	9.619	0.838	A	3	A	B
32		1,1,1-trichloroethane	97	10.014	0.873	LO	2	A	B
33		carbon tetrachloride	117	10.574	0.922	QO	2	A	B
34		1,1-dichloropropene	75	10.373	0.904	A	2	A	B
35	S	SS 1,2-DCA-d4_MS	65	10.756	0.937	A	2	A	B
36		tert-amyl methyl ether(TAME)	73	10.683	0.931	LO	2	A	B
37	M	benzene	78	10.982	0.957	A	1	A	B
38		1,2-dichloroethane	62	10.975	0.957	A	2	A	B
39	M	trichloroethene	95	12.259	1.068	A	2	A	B
40	C	1,2-dichloropropane	63	12.600	1.098	A	2	A	B
41		1,4-dioxaneV	88	13.086	1.140	A	2	A	B
42		dibromomethane	93	13.093	1.141	A	2	A	B
43		bromodichloromethane	83	13.007	1.134	A	2	A	B
44		2-Chloroethoxyethene	63	13.549	1.181	A	2	A	B
45		4-methyl-2-pentanone(MIBK)	58	13.604	1.186	LO	3	A	B
46		cis-1,3-dichloropropene	75	13.902	1.212	LO	2	A	B
47	I	Chlorobenzene-D5 IS	117	16.329	1.000	A	2	A	B
48	S	SS Toluene-d8_MS	98	14.261	0.873	A	2	A	B
49	MC	toluene	91	14.382	0.881	QO	1	A	B
50		trans-1,3-dichloropropene	75	14.662	0.898	LO	2	A	B
51		1,1,2-trichloroethane	83	14.875	0.911	A	2	A	B
52		2-hexanone	43	14.899	0.912	LO	2	A	B
53		tetrachloroethene	166	15.301	0.937	A	2	A	B
54		1,3-dichloropropane	76	15.228	0.933	A	2	A	B
55		dibromochloromethane	129	15.581	0.954	LO	1	A	B

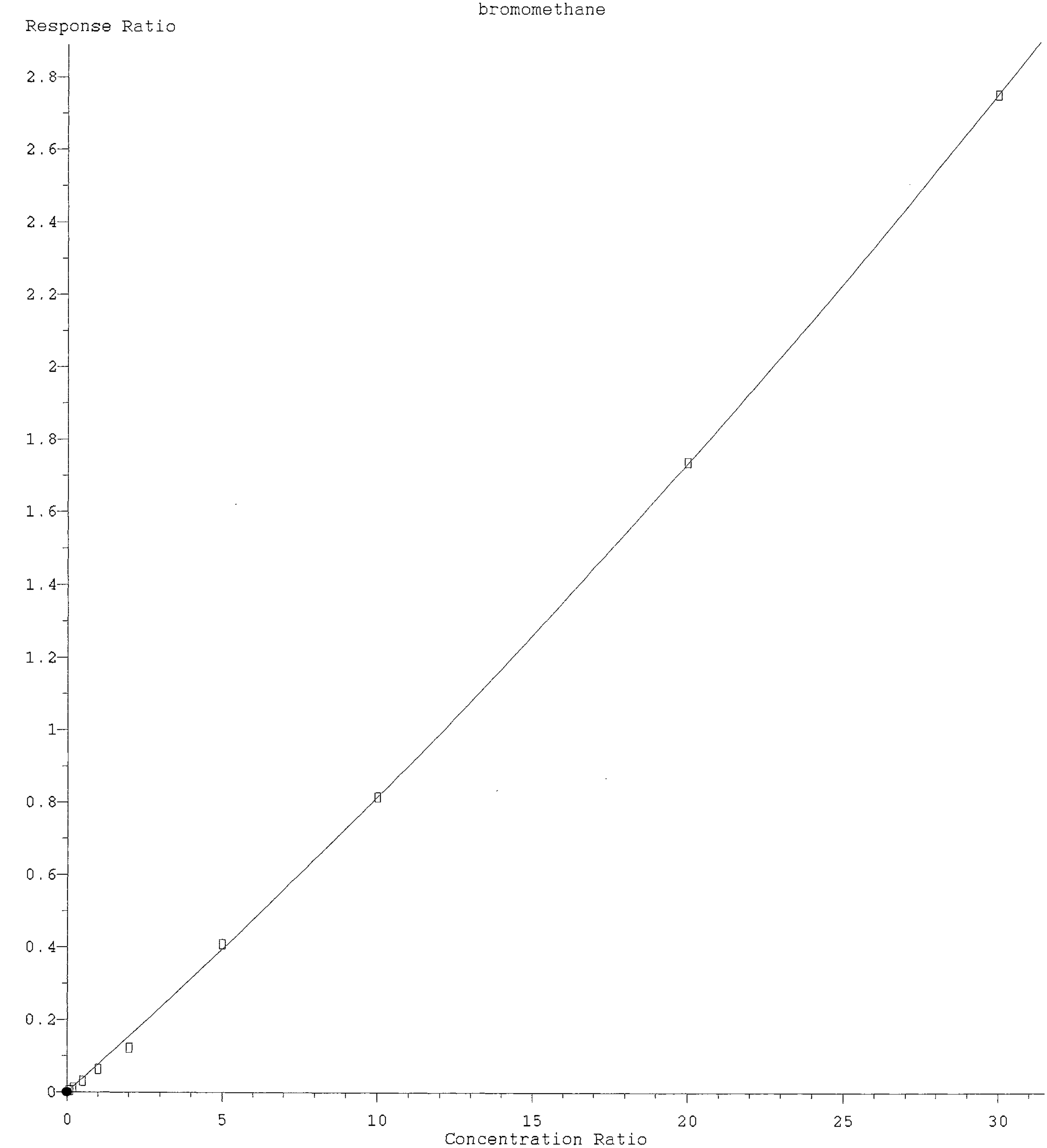
56		1,2-dibromoethane	107	15.848	0.971	QO	1	A	B
57	MP	chlorobenzene	112	16.378	1.003	A	2	A	B
58		1,1,1,2-tetrachloroethane	131	16.432	1.006	LO	2	A	B
59	C	ethylbenzene	91	16.439	1.007	QO	1	A	B
60		mp-xylene	106	16.536	1.013	QO	1	A	B
61		o-xylene	106	17.071	1.045	A	1	A	B
62		styrene	104	17.114	1.048	A	2	A	B
63	P	bromoform	173	17.534	1.074	LO	2	A	B
64		iso-propylbenzene	105	17.485	1.071	QO	1	A	B
65	S	SS 4-BFB_MS	95	17.789	1.089	A	2	A	B
66	I	1,4-Dichlorobenzene-D4 IS	152	19.091	1.000	A	2	A	B
67		bromobenzene	156	18.026	0.944	A	2	A	B
68	P	1,1,2,2-tetrachloroethane	83	17.698	0.927	A	1	A	B
69		1,2,3-trichloropropane	110	17.868	0.936	A	1	A	B
70		t-1,4-dichloro-2-butene	53	17.929	0.939	LO	3	A	B
71		n-propylbenzene	91	17.953	0.940	QO	1	A	B
72		2-chlorotoluene	91	18.172	0.952	QO	1	A	B
73		4-chlorotoluene	91	18.221	0.954	QO	1	A	B
74		1,3,5-trimethylbenzene	105	18.130	0.950	A	1	A	B
75		tert-butylbenzene	119	18.531	0.971	A	1	A	B
76		1,2,4-trimethylbenzene	105	18.574	0.973	QO	1	A	B
77		sec-butylbenzene	105	18.756	0.982	QO	1	A	B
78		1,3-dichlorobenzeneV	146	19.018	0.996	QO	2	A	B
79		p-isopropyltoluene	119	18.890	0.989	A	1	A	B
80		1,4-dichlorobenzeneV	146	19.121	1.002	QO	2	A	B
81		1,2-dichlorobenzeneV	146	19.486	1.021	QO	2	A	B
82		n-butylbenzene	91	19.298	1.011	QO	1	A	B
83	S	SS 1,2-DCB-d4_MS	152	19.462	1.019	A	2	A	B
84		1,2-dibromo-3-chloropropane	75	20.204	1.058	QO	2	A	B
85		1,3,5-trichlorobenzV	180	20.429	1.070	A	1	A	B
86		1,2,4-trichlorobenzV	180	21.080	1.104	A	2	A	B
87		hexachlorobutadieneV	225	21.208	1.111	A	2	A	B
88		naphthaleneV	128	21.391	1.120	A	1	A	B
89		1,2,3-trichlorobenzV	180	21.664	1.135	A	2	A	B
90	S	SS 2,5-DBT_MS	250	22.905	1.200	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

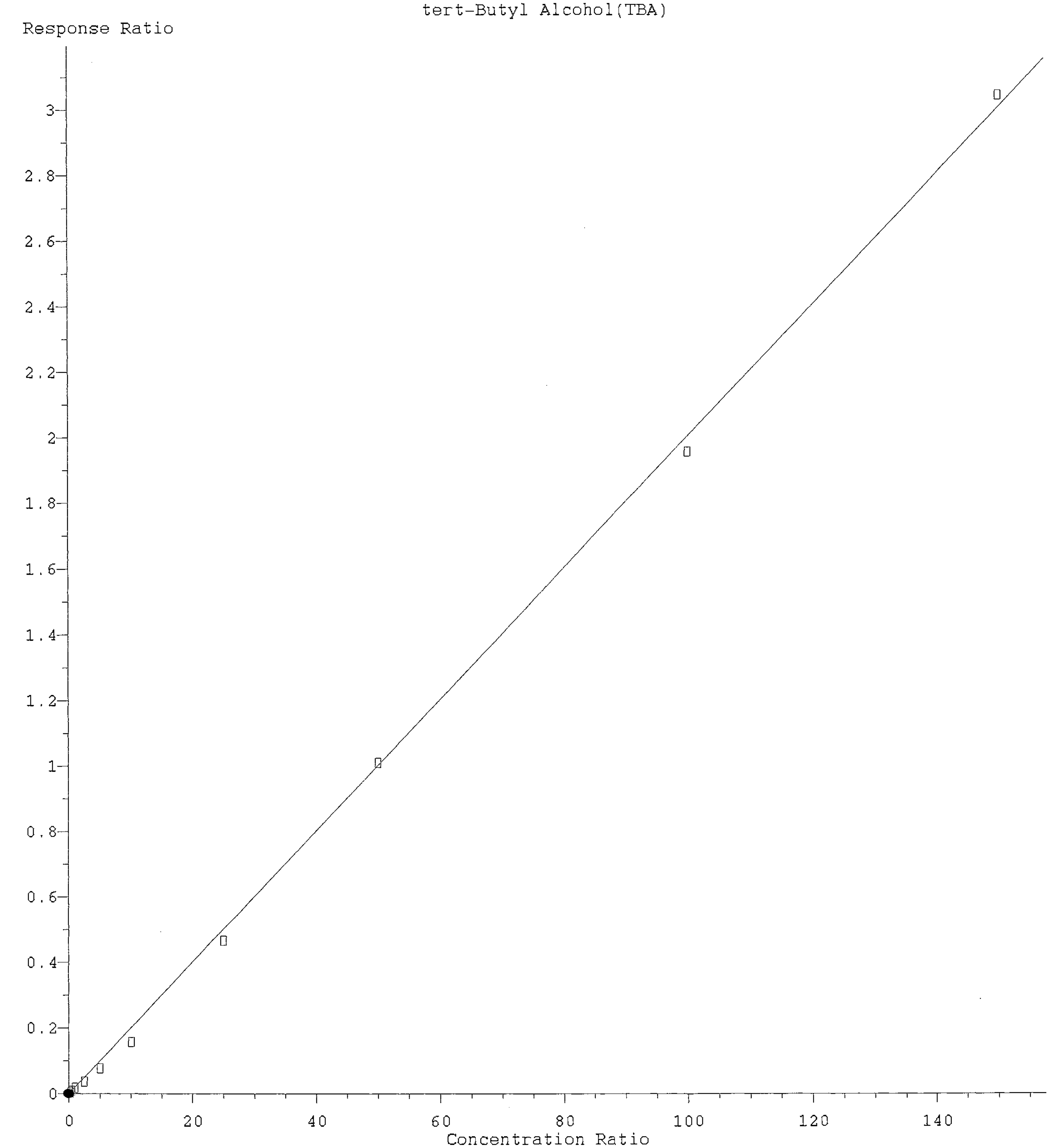
4VID1213.M Tue Dec 27 10:19:07 2016



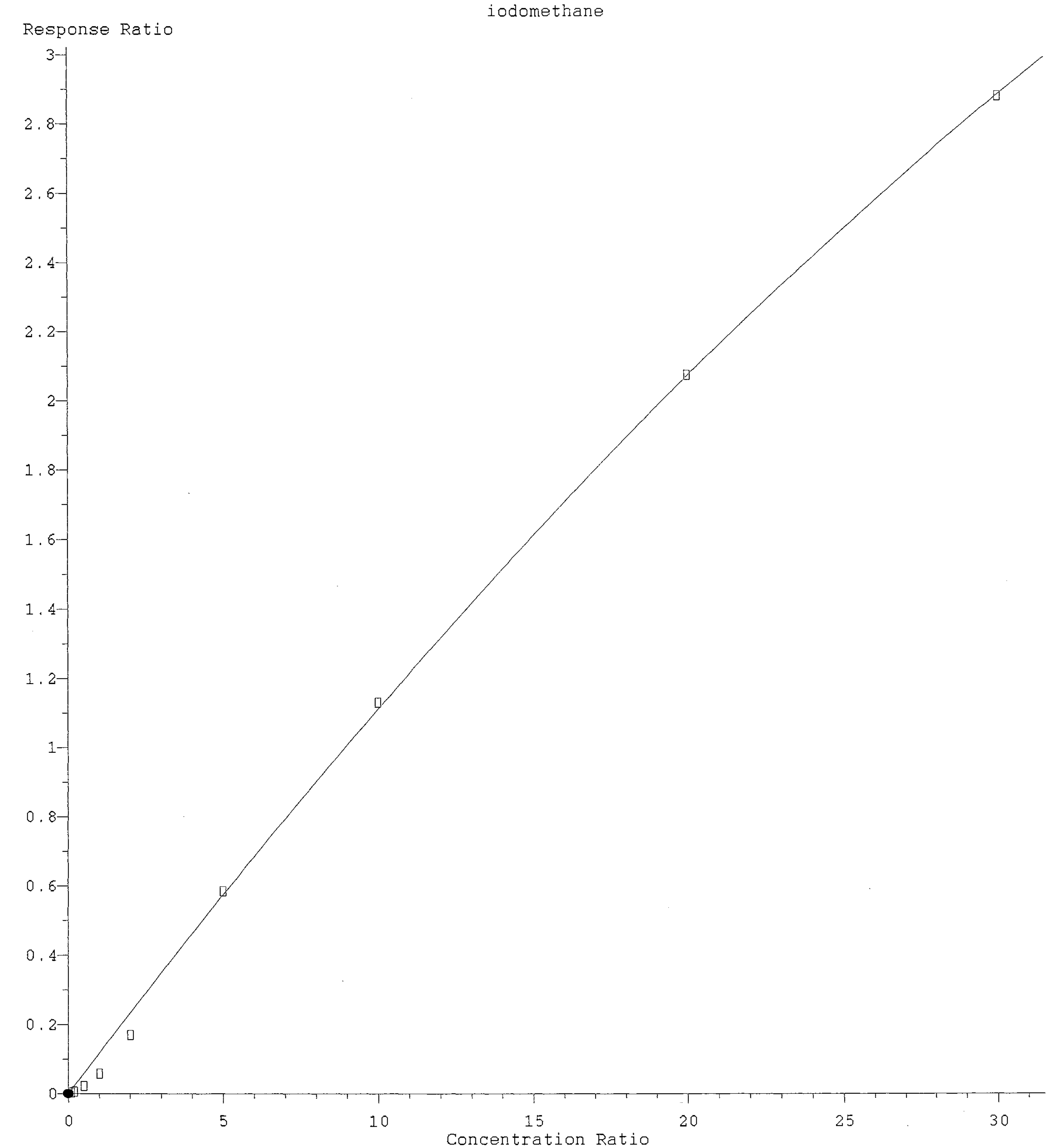
R = -3.615e-003 A*A + 1.750e-001 A + 0.000e+000
Coef of Det (r^2) = 0.999   Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



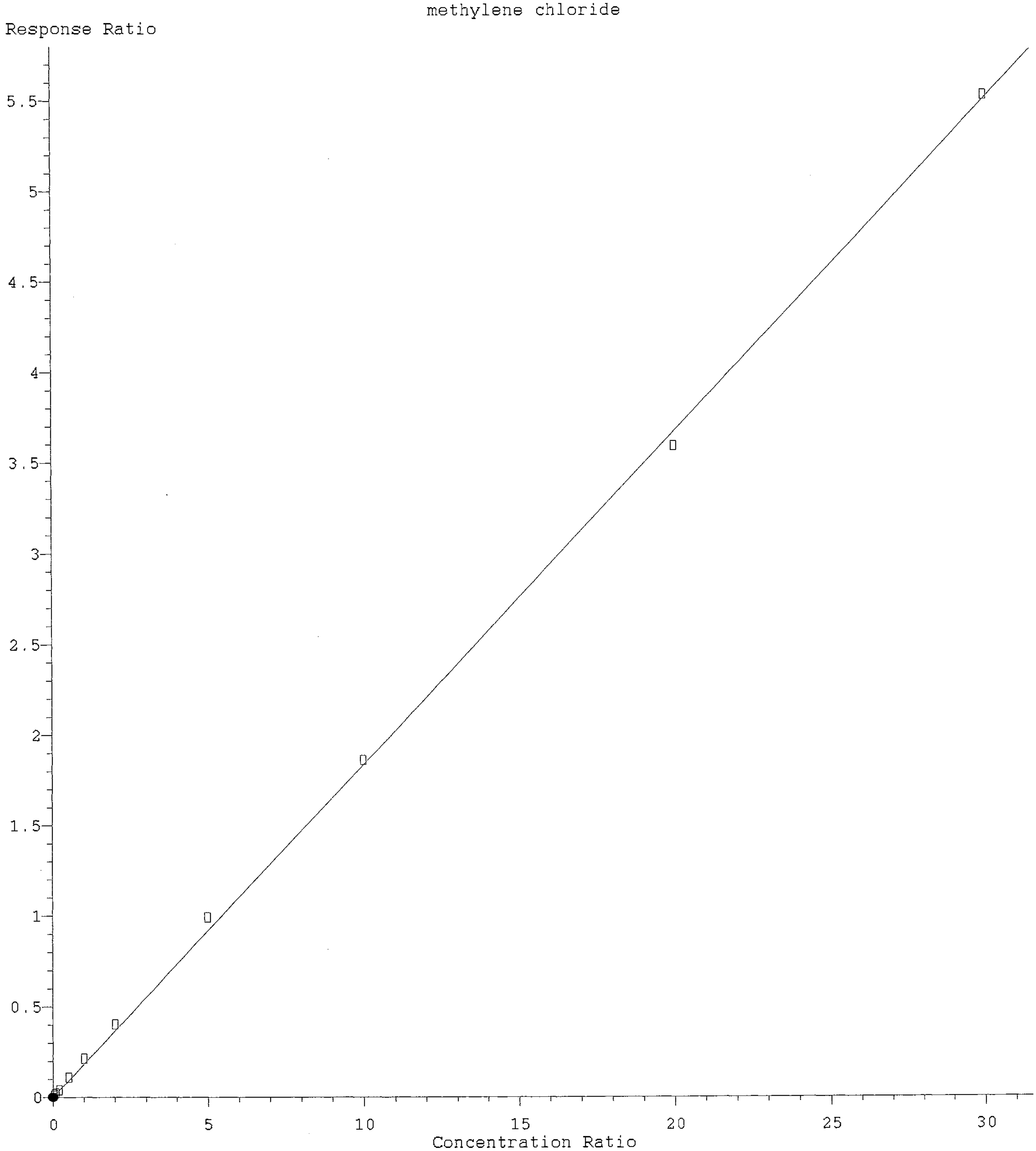
R = 5.140e-004 A*A + 7.643e-002 A + 0.000e+000
Coef of Det (r^2) = 1.000 Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



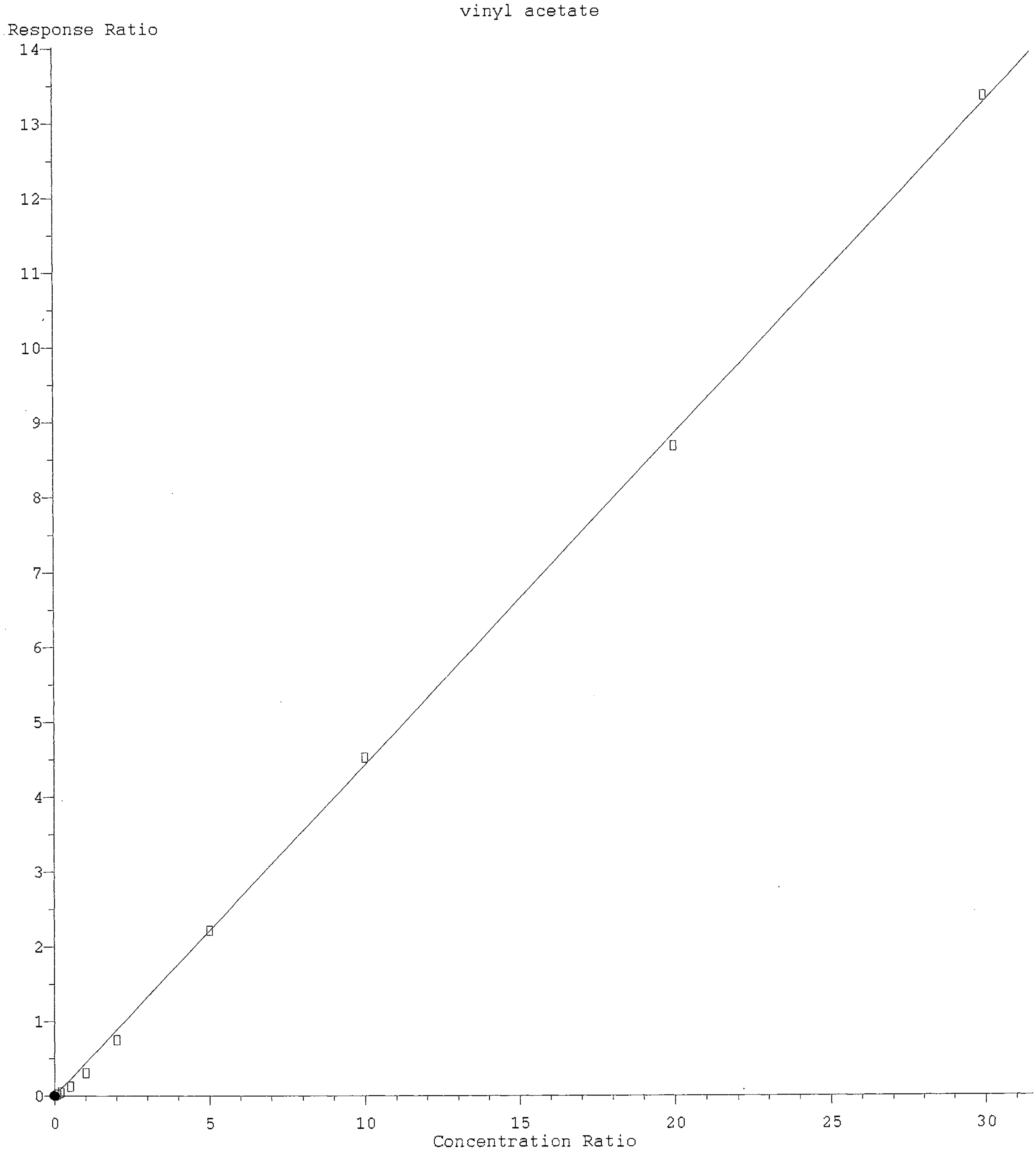
Response = 2.004e-002 * Amt
Coef of Det (r^2) = 0.999   Curve Fit: Linear/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



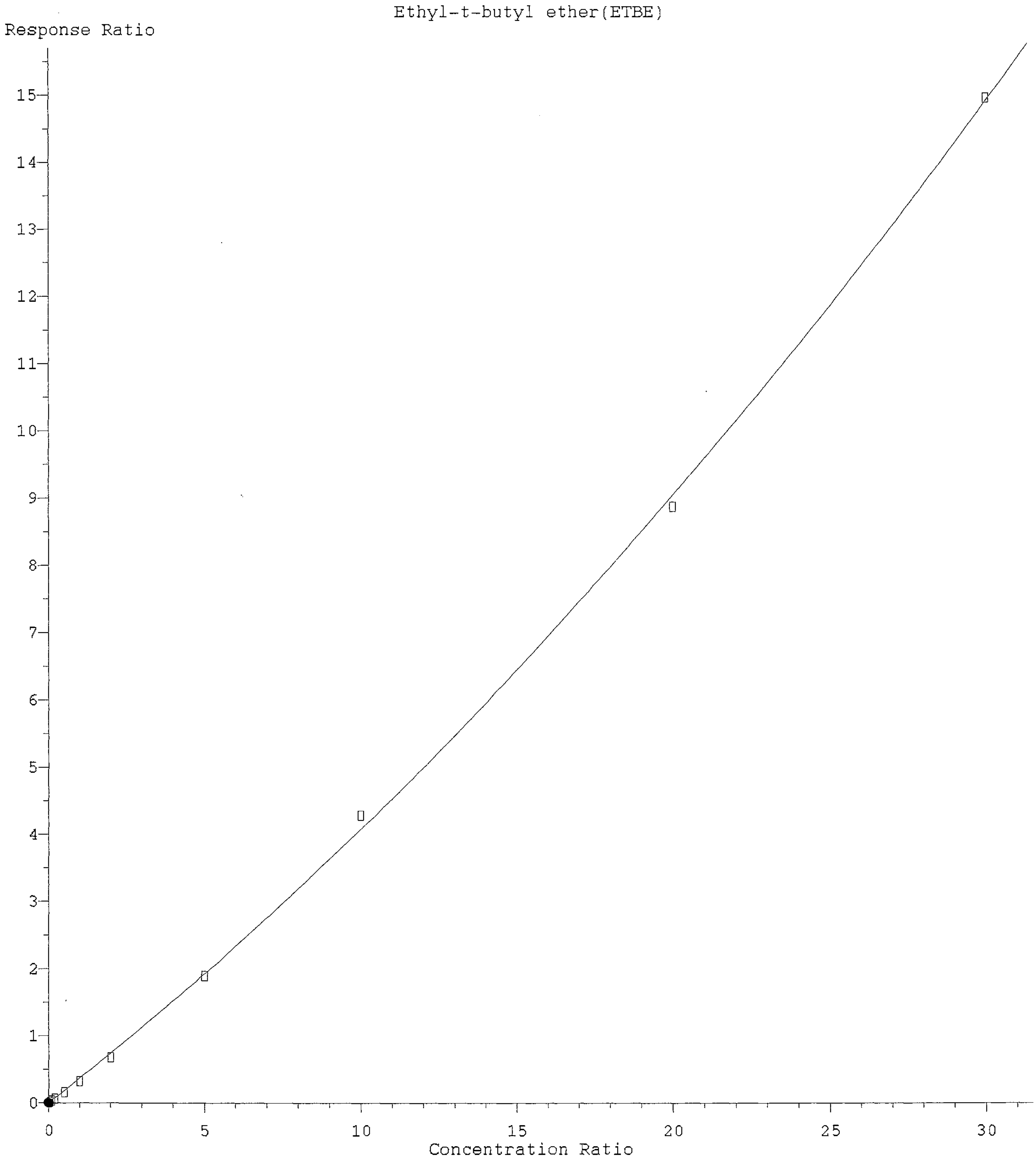
R = -7.473e-004 A*A + 1.185e-001 A + 0.000e+000
Coef of Det (r^2) = 0.999   Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



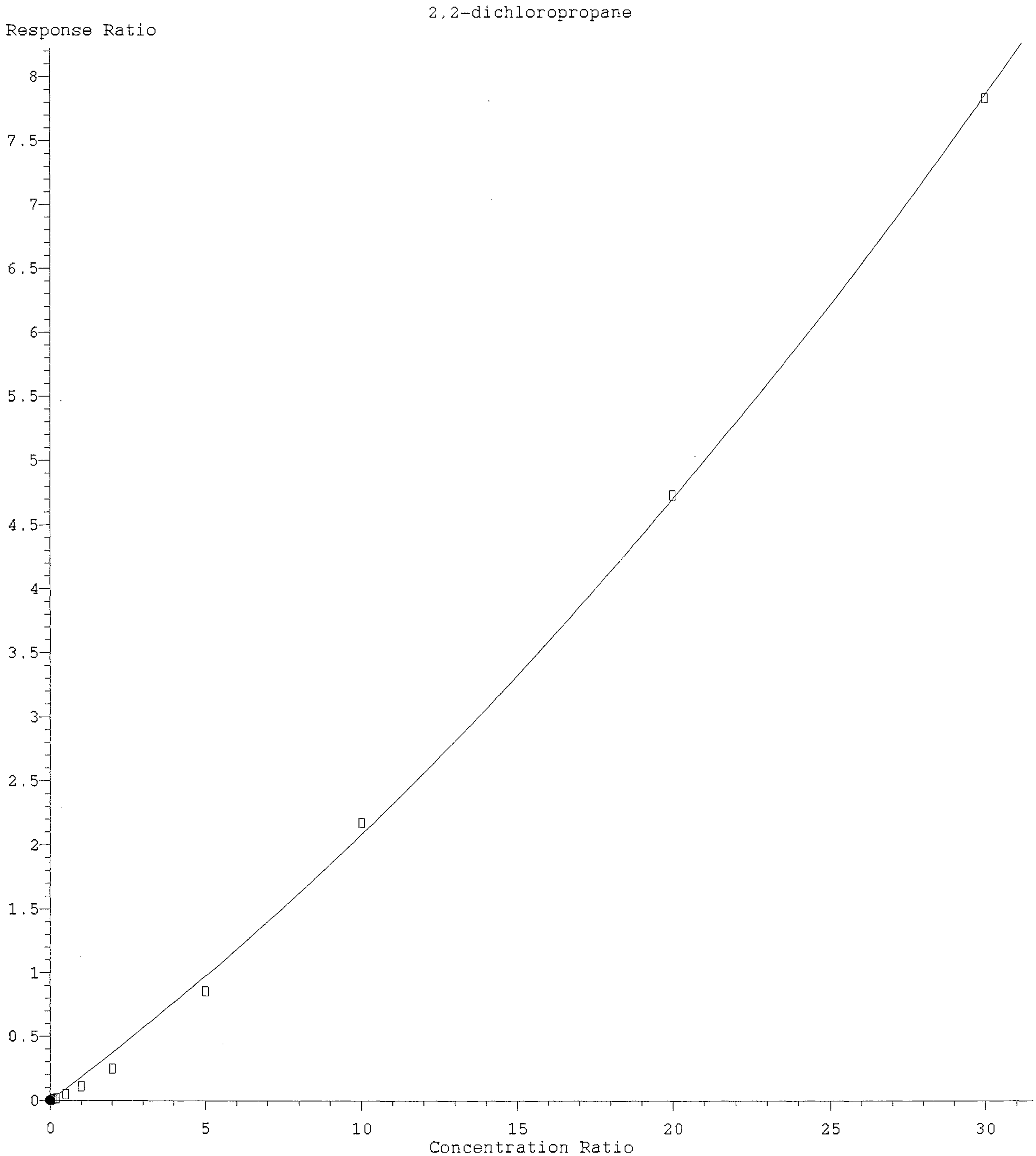
Response = 1.833e-001 * Amt
Coef of Det (r^2) = 1.000   Curve Fit: Linear/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



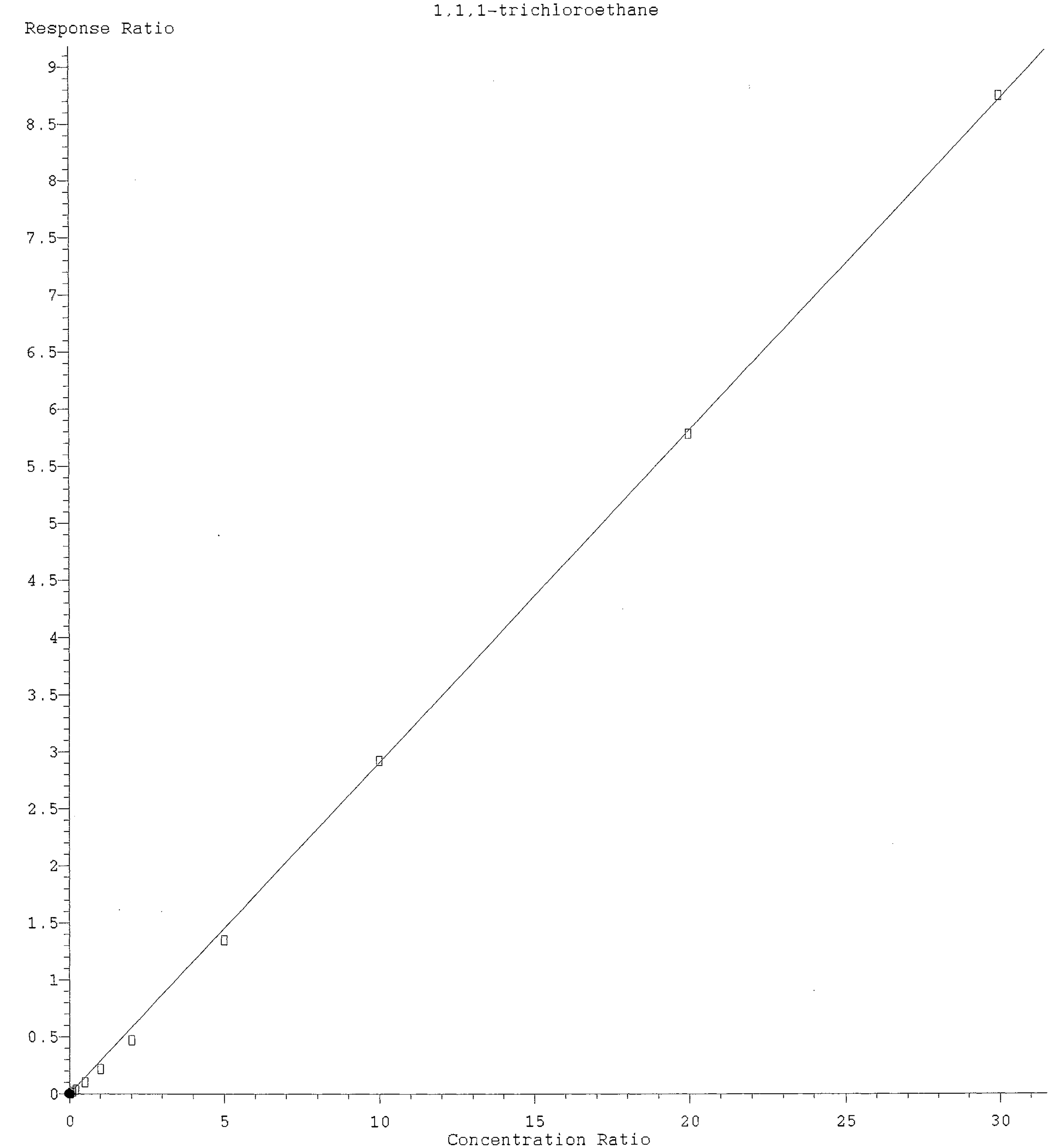
Response = 4.422e-001 * Amt
Coef of Det (r^2) = 1.000   Curve Fit: Linear/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



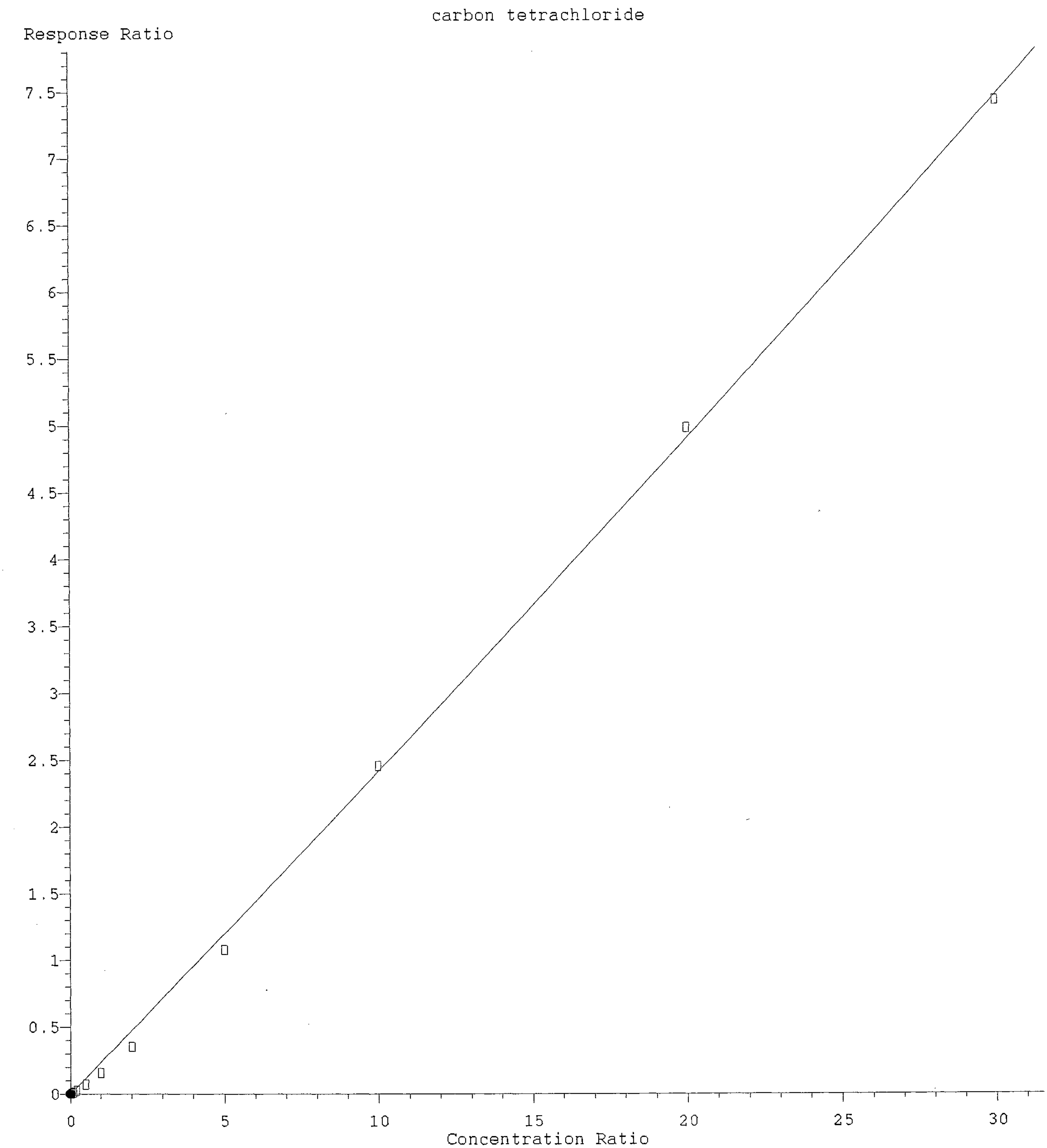
R = 4.475e-003 A*A + 3.625e-001 A + 0.000e+000
Coef of Det (r^2) = 1.000   Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



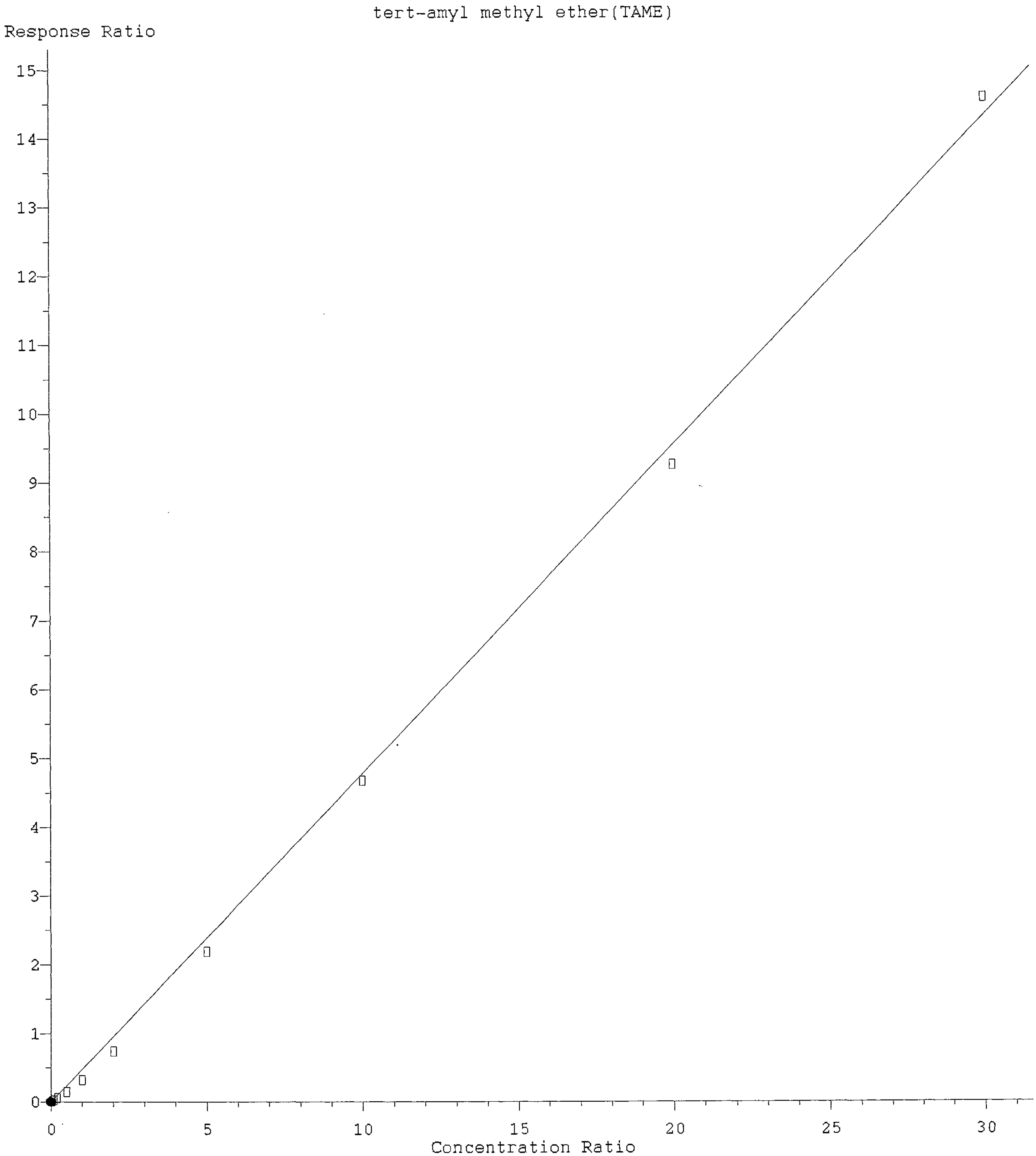
R = 2.677e-003 A*A + 1.813e-001 A + 0.000e+000
Coef of Det (r^2) = 0.999   Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



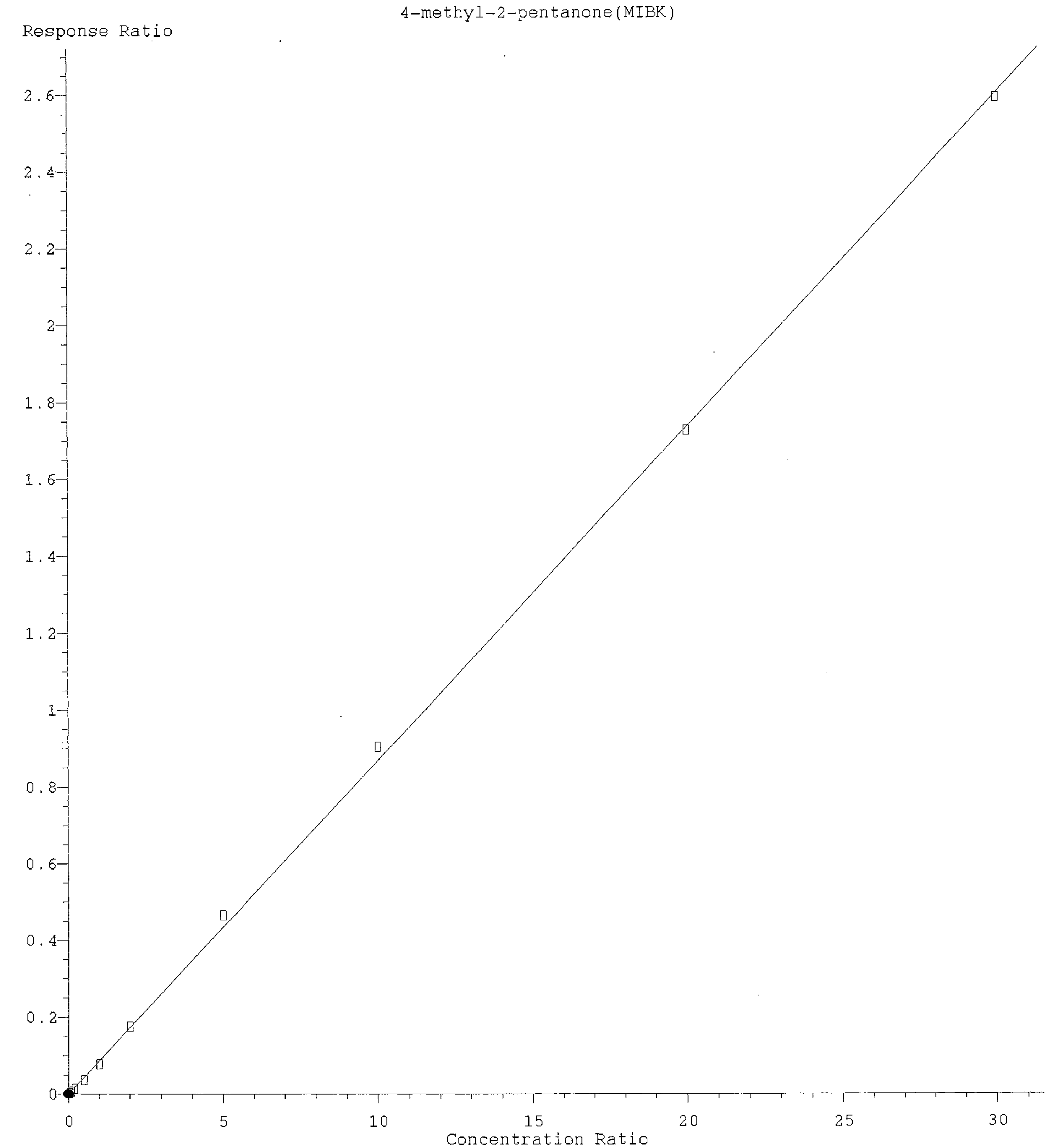
Response = 2.903e-001 * Amt
Coef of Det (r^2) = 1.000   Curve Fit: Linear/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



R = 3.833e-004 A*A + 2.376e-001 A + 0.000e+000
Coef of Det (r^2) = 0.999 Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016

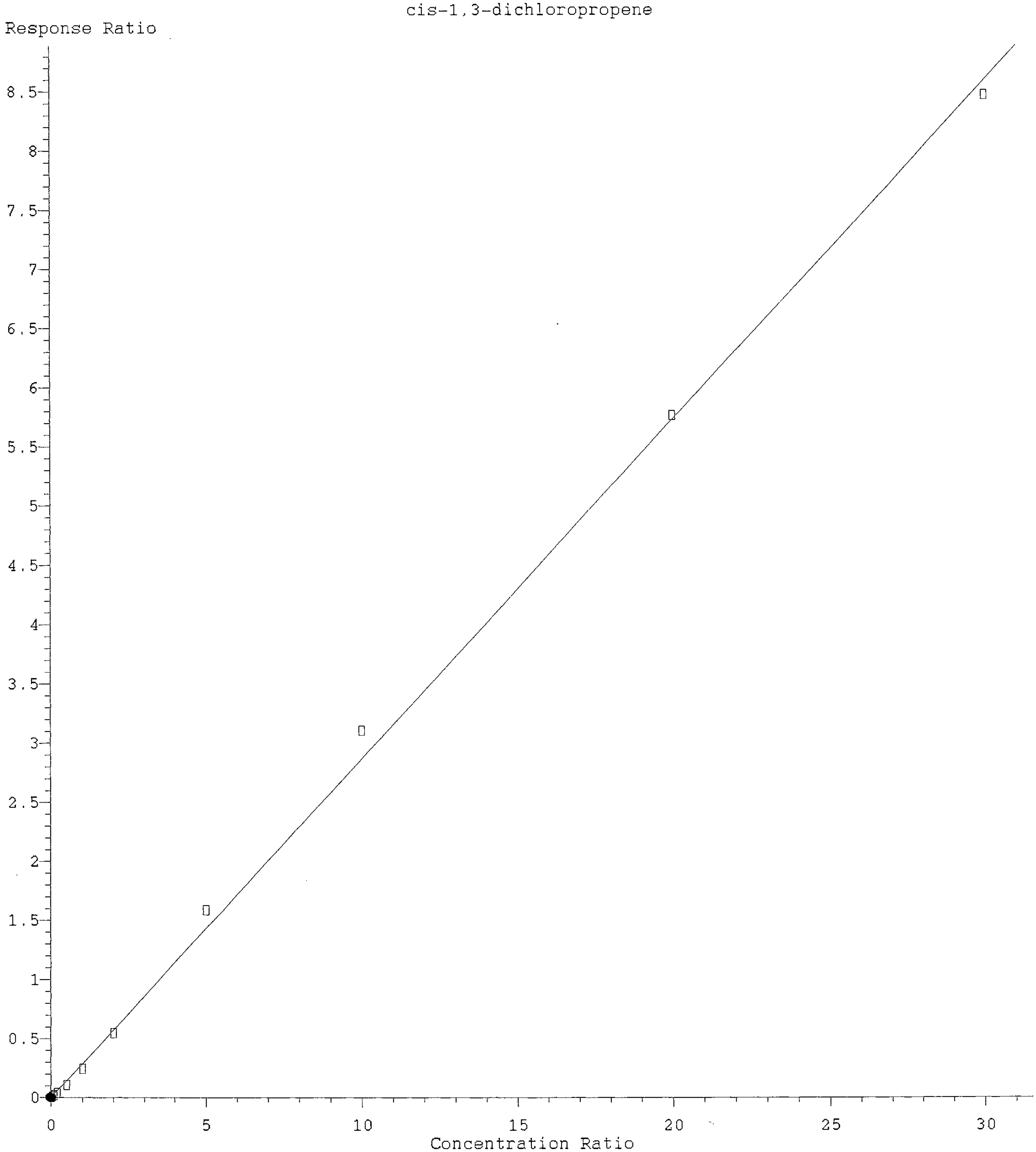


Response = 4.772e-001 * Amt
Coef of Det (r^2) = 0.999 Curve Fit: Linear/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



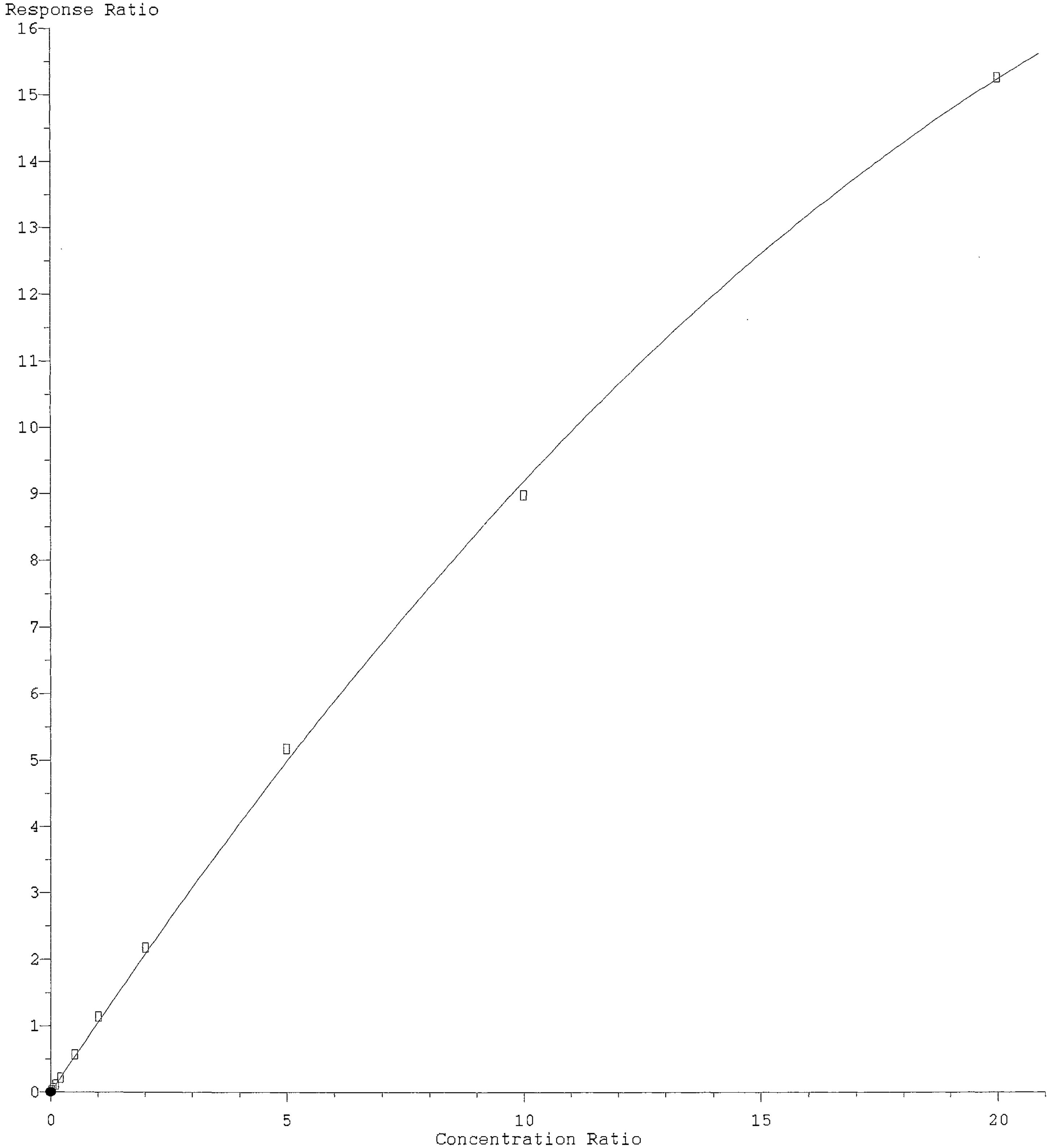
Response = 8.681e-002 * Amt
Coef of Det (r^2) = 1.000   Curve Fit: Linear/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016

cis-1,3-dichloropropene

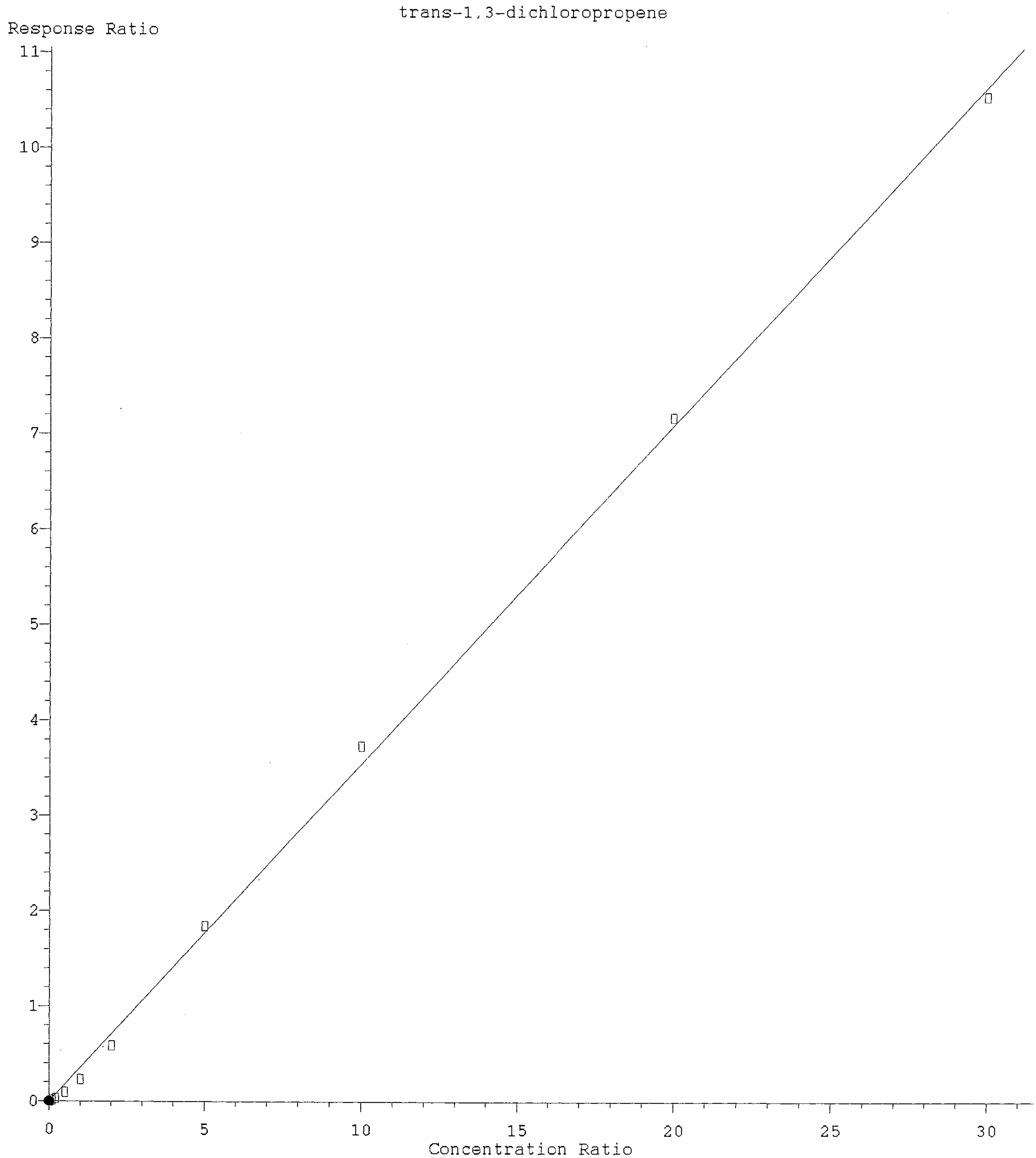


Response = 2.865e-001 * Amt
Coef of Det (r^2) = 0.999 Curve Fit: Linear/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016

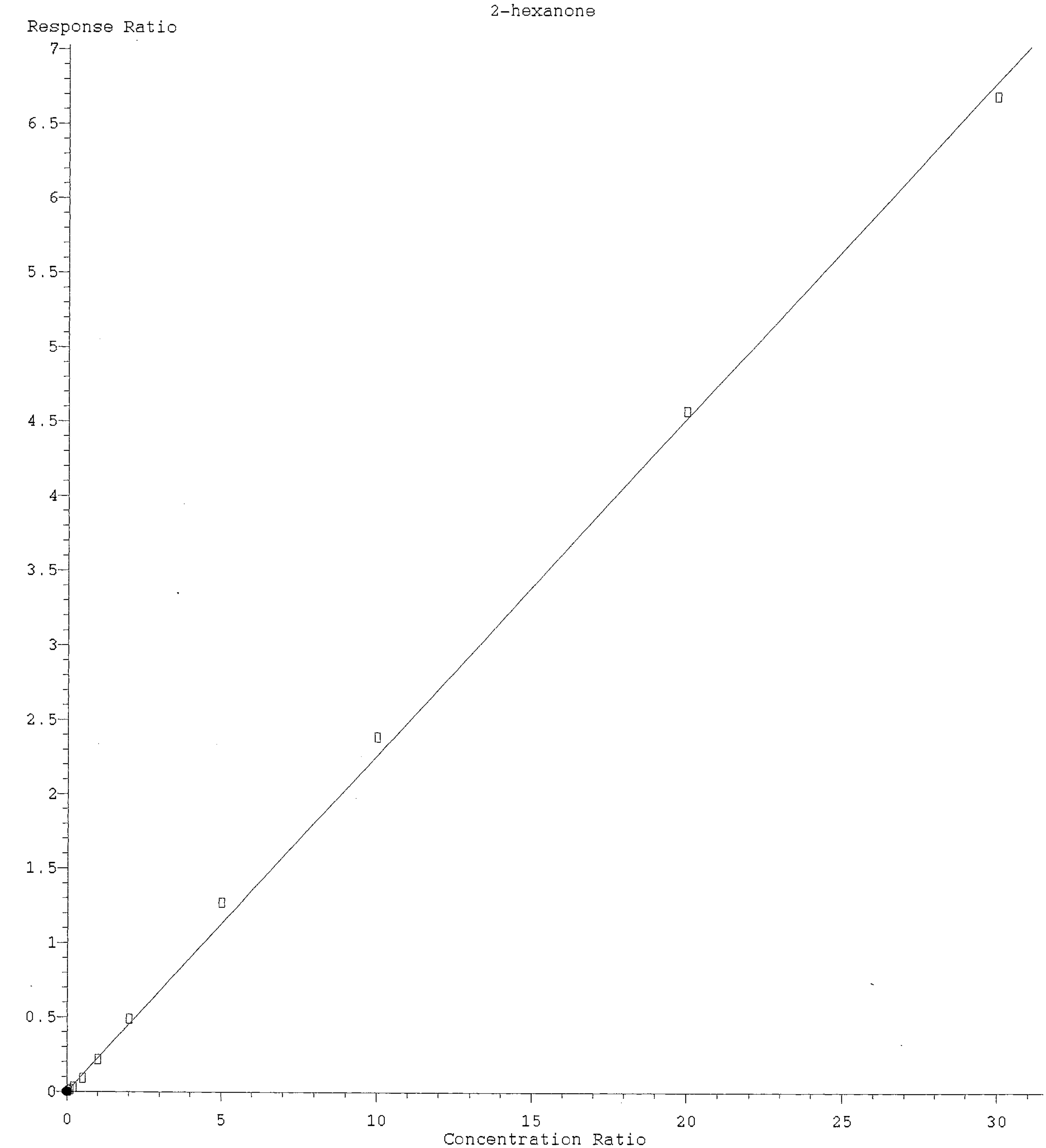
toluene



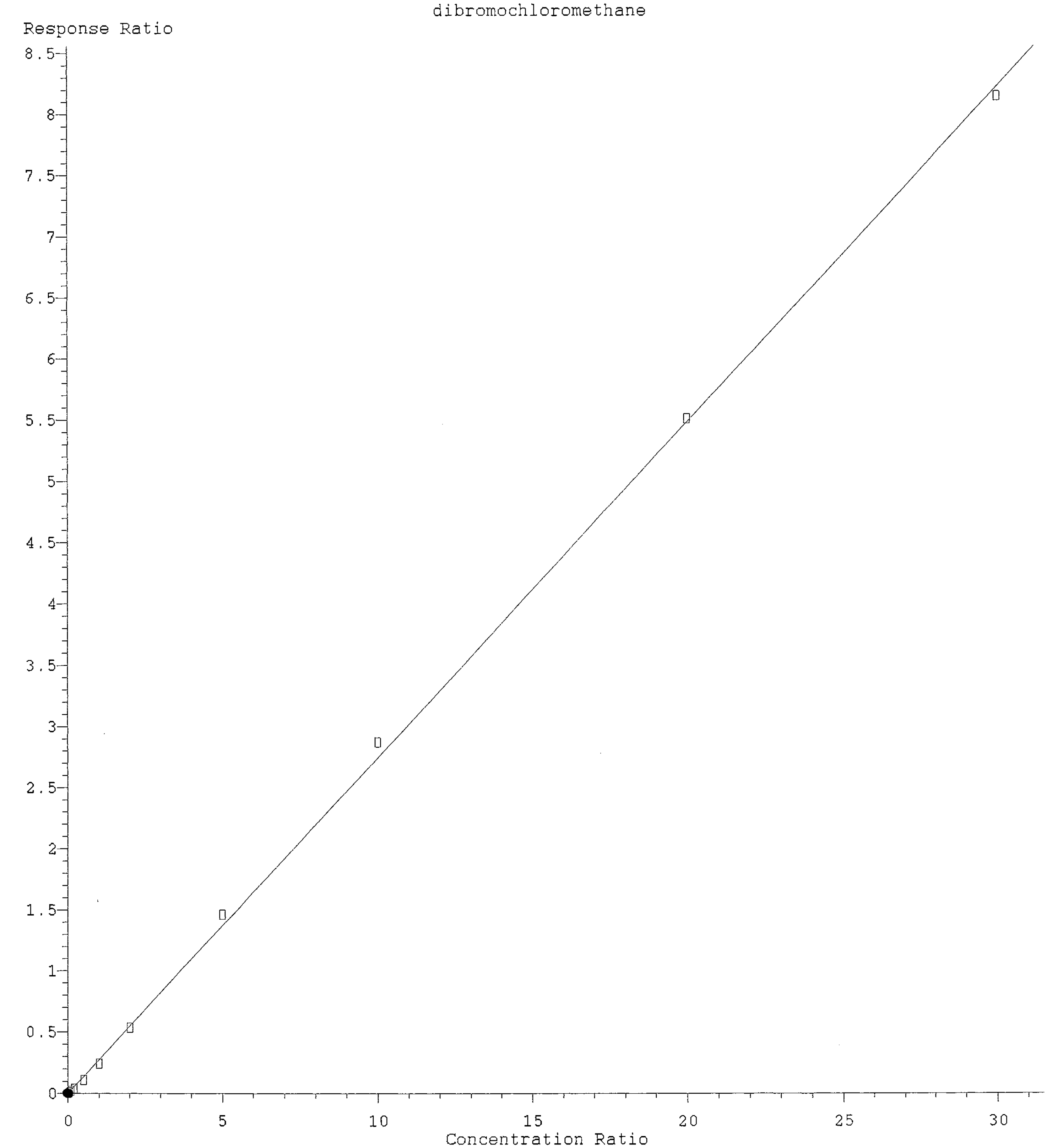
R = -1.566e-002 A*A + 1.074e+000 A + 0.000e+000
Coef of Det (r^2) = 1.000 Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



Response = 3.548e-001 * Amt
Coef of Det (r^2) = 0.999 Curve Fit: Linear/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016

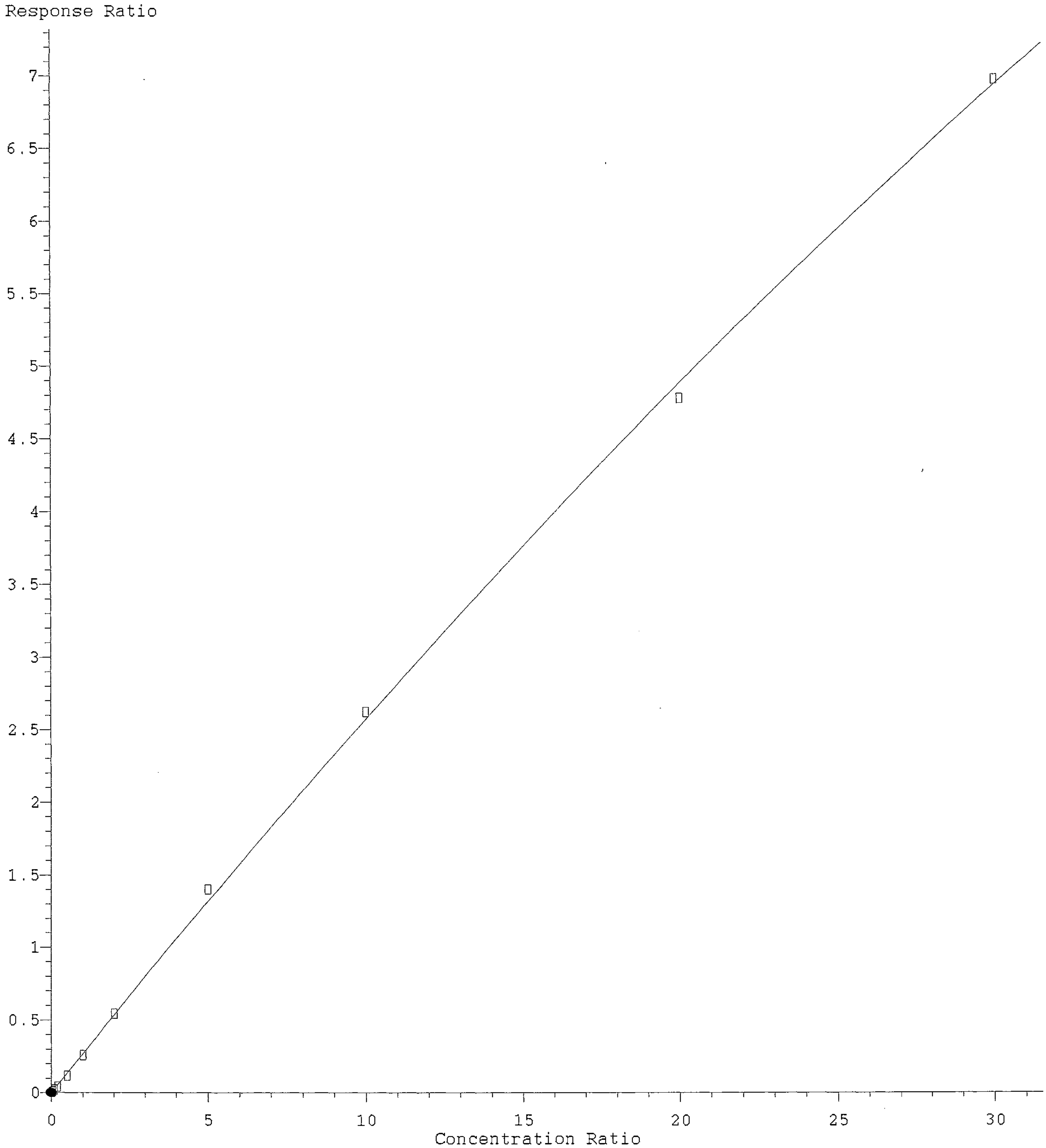


Response = 2.264e-001 * Amt
Coef of Det (r^2) = 0.999   Curve Fit: Linear/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016

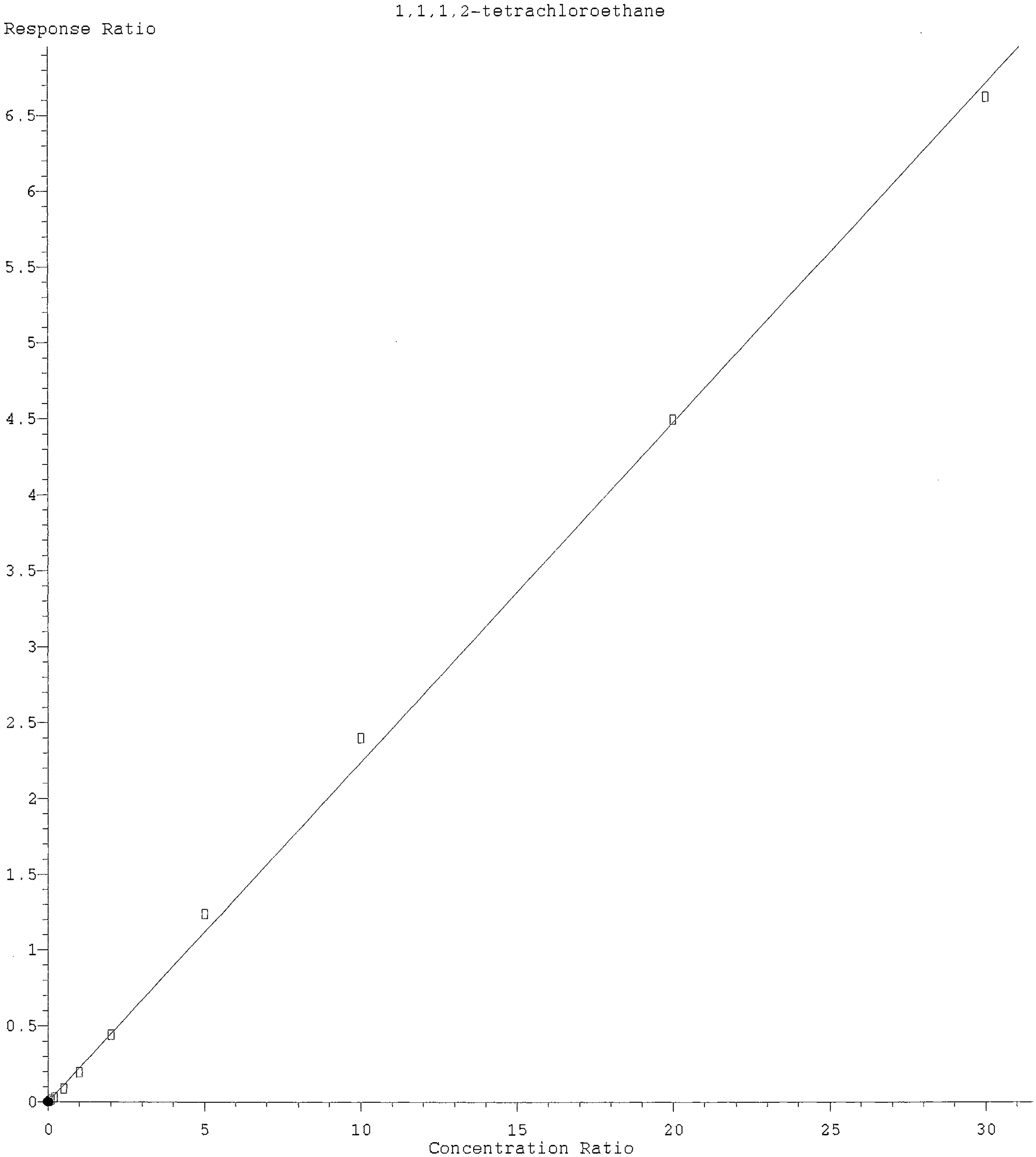


Response = 2.742e-001 * Amt
Coef of Det (r^2) = 1.000   Curve Fit: Linear/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016

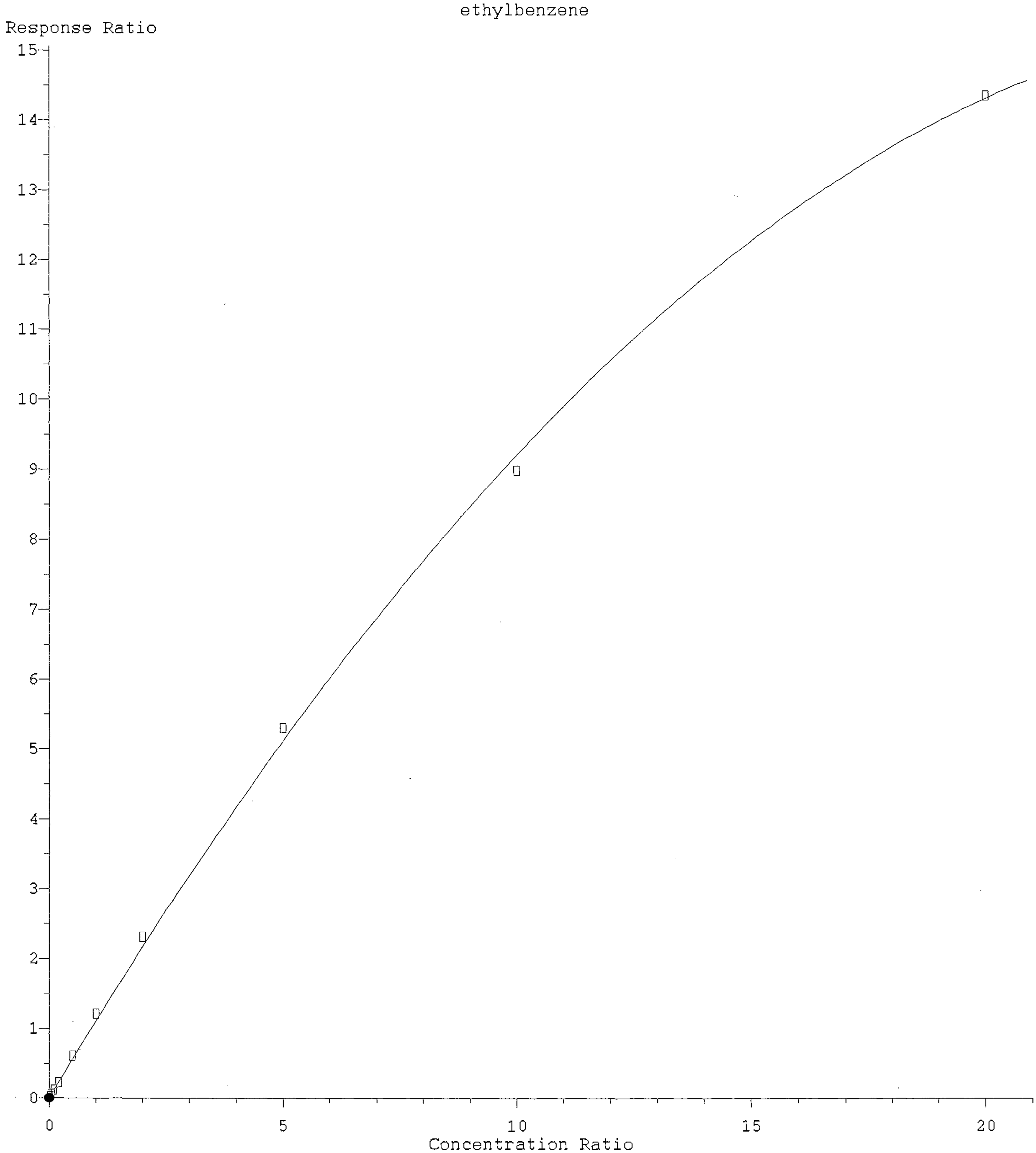
1,2-dibromoethane



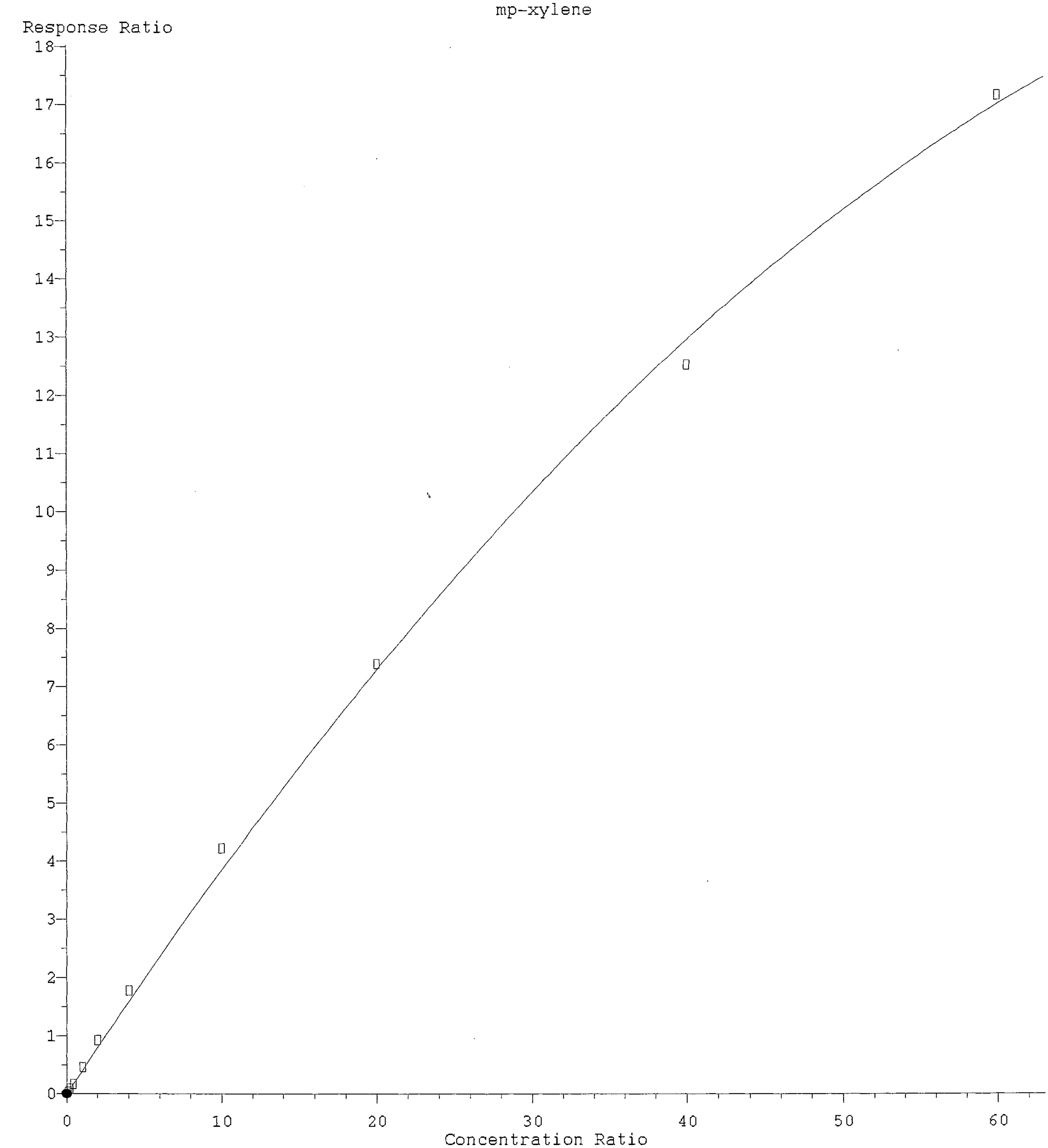
R = -1.291e-003 A*A + 2.699e-001 A + 0.000e+000
Coef of Det (r^2) = 1.000   Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



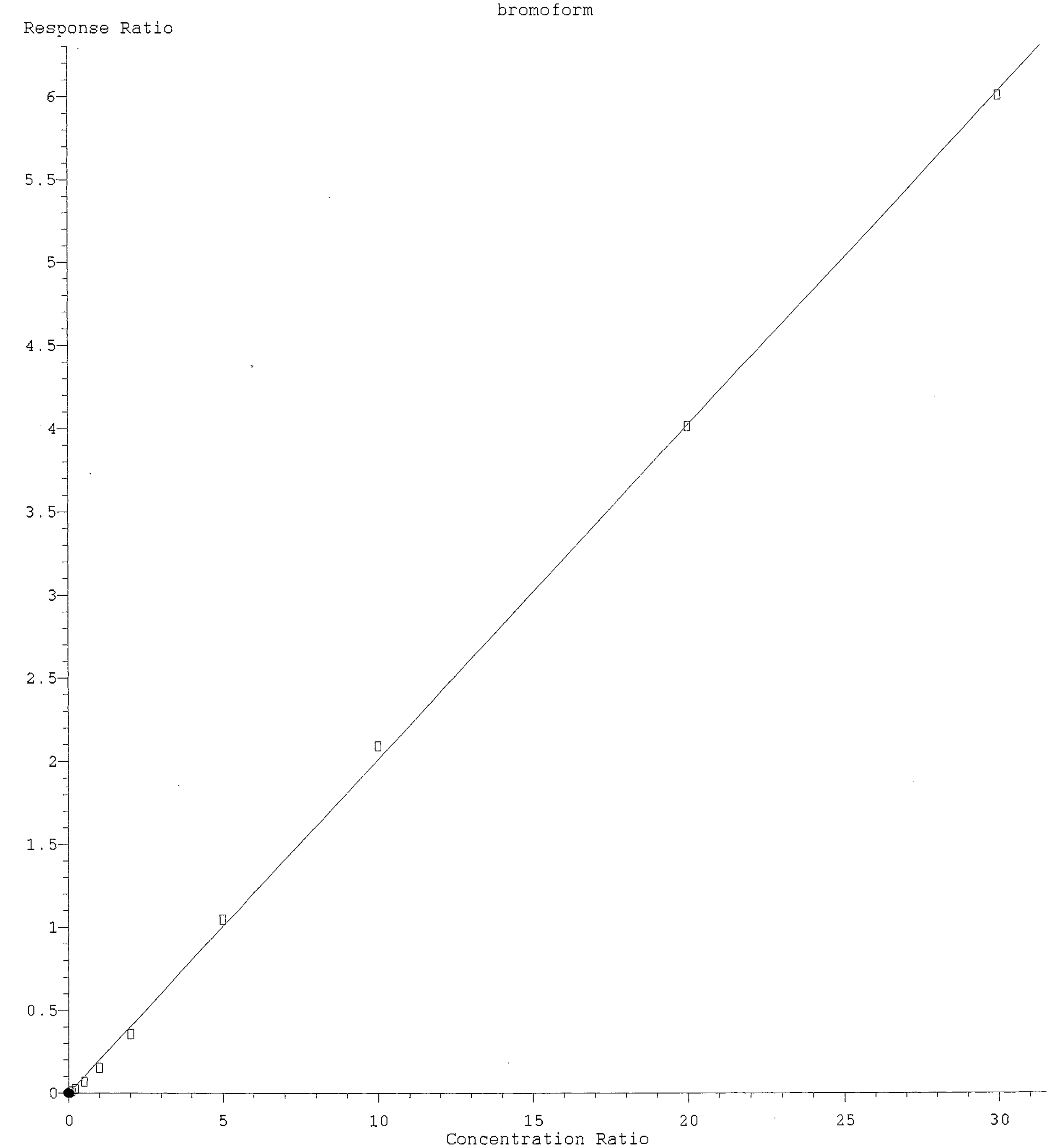
Response = 2.237e-001 * Amt
Coef of Det (r^2) = 0.999   Curve Fit: Linear/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



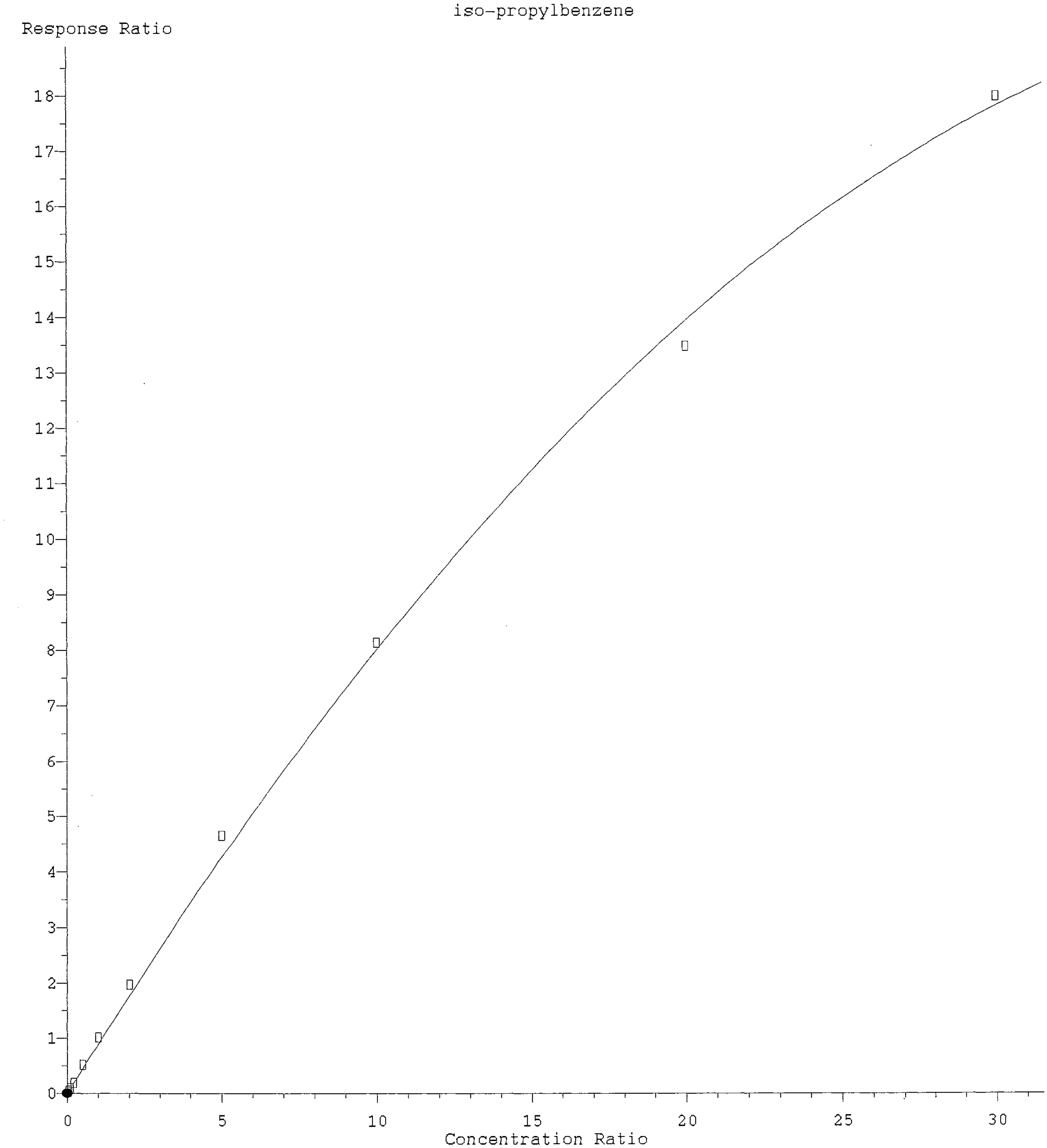
R = -2.050e-002 A*A + 1.125e+000 A + 0.000e+000
Coef of Det (r^2) = 1.000   Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



R = -2.024e-003 A*A + 4.048e-001 A + 0.000e+000
Coef of Det (r^2) = 0.999   Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016

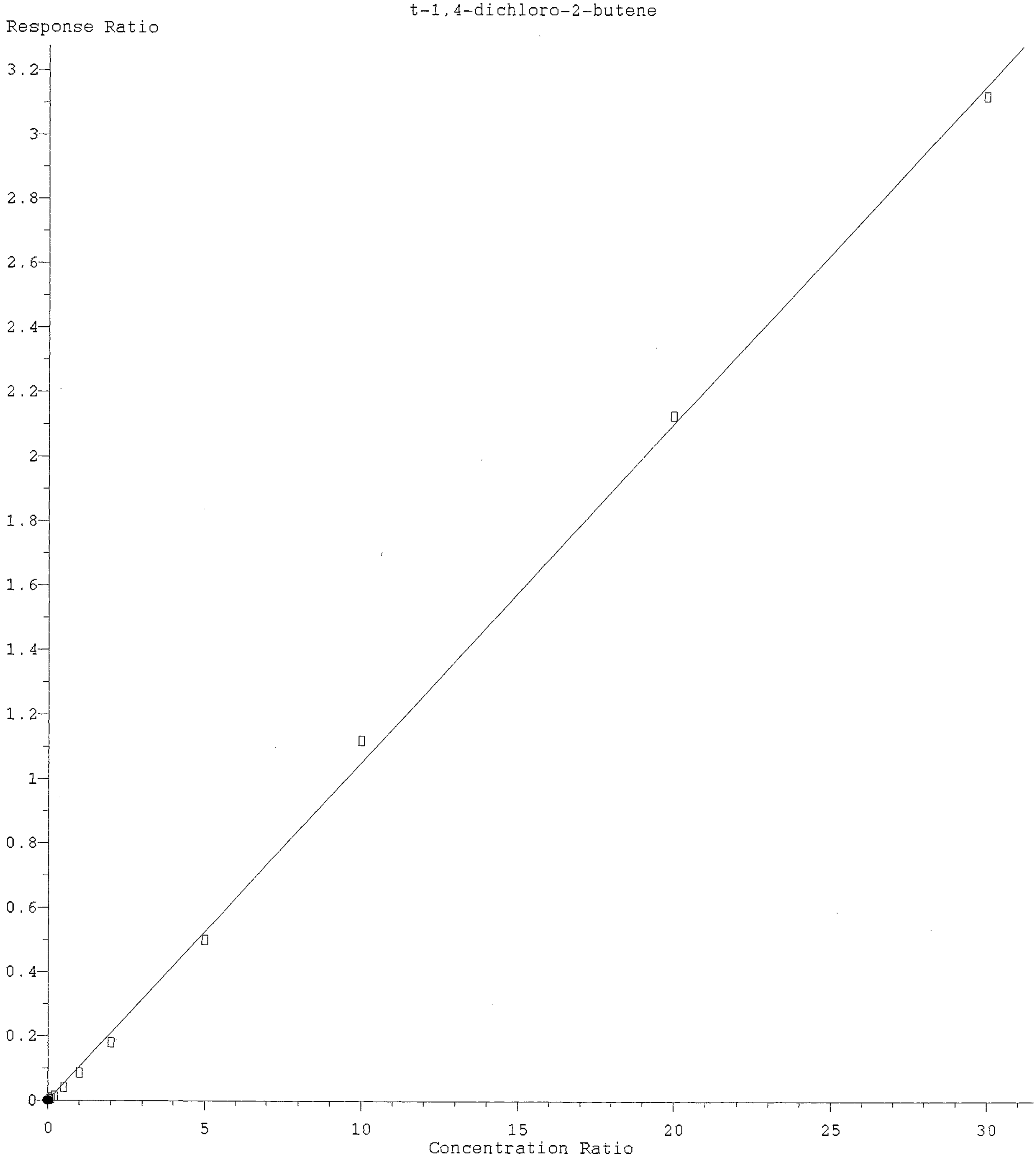


Response = 2.010e-001 * Amt
Coef of Det (r^2) = 1.000   Curve Fit: Linear/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016

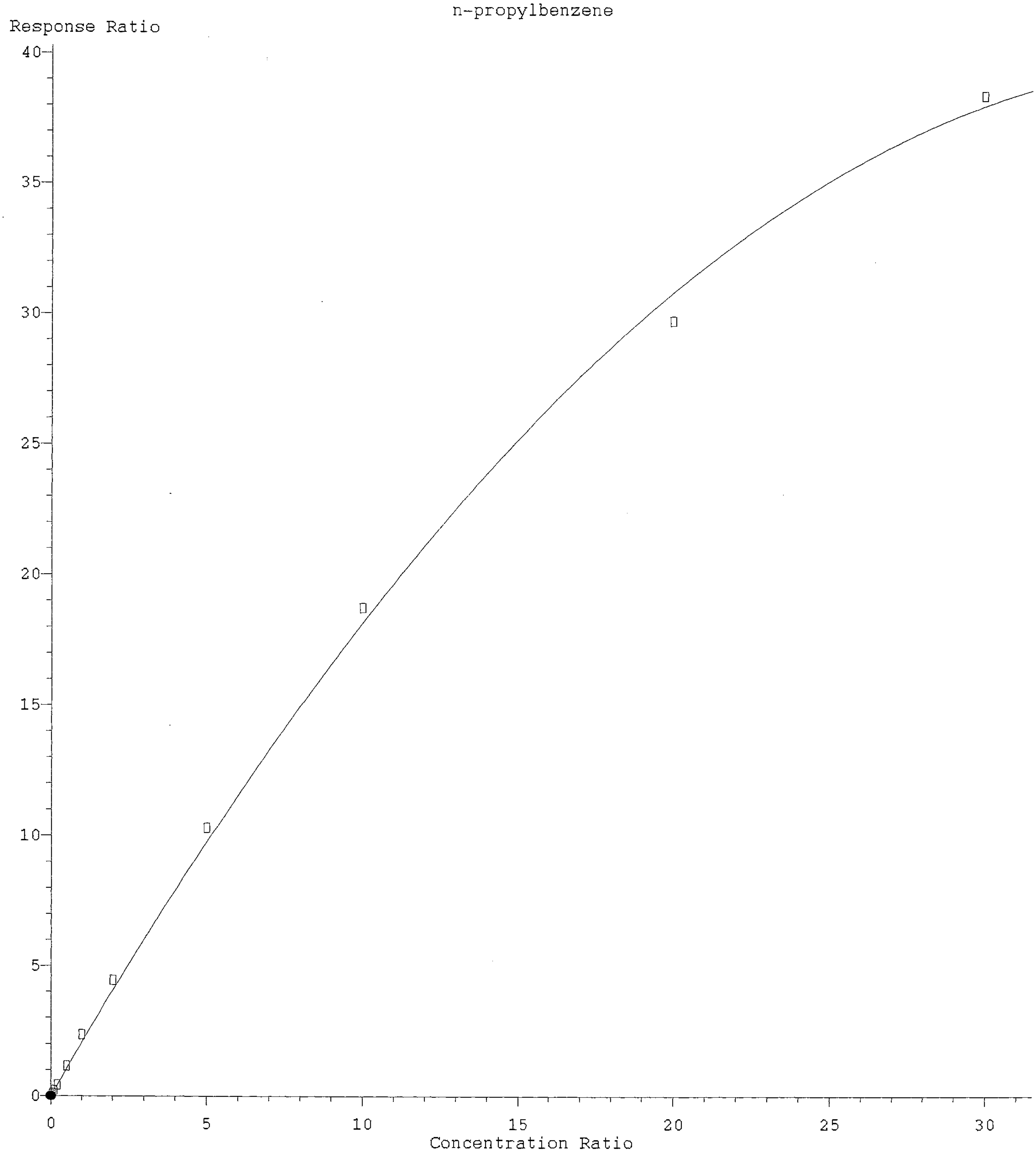


R = -1.033e-002 A*A + 9.038e-001 A + 0.000e+000
Coef of Det (r^2) = 0.999 Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016

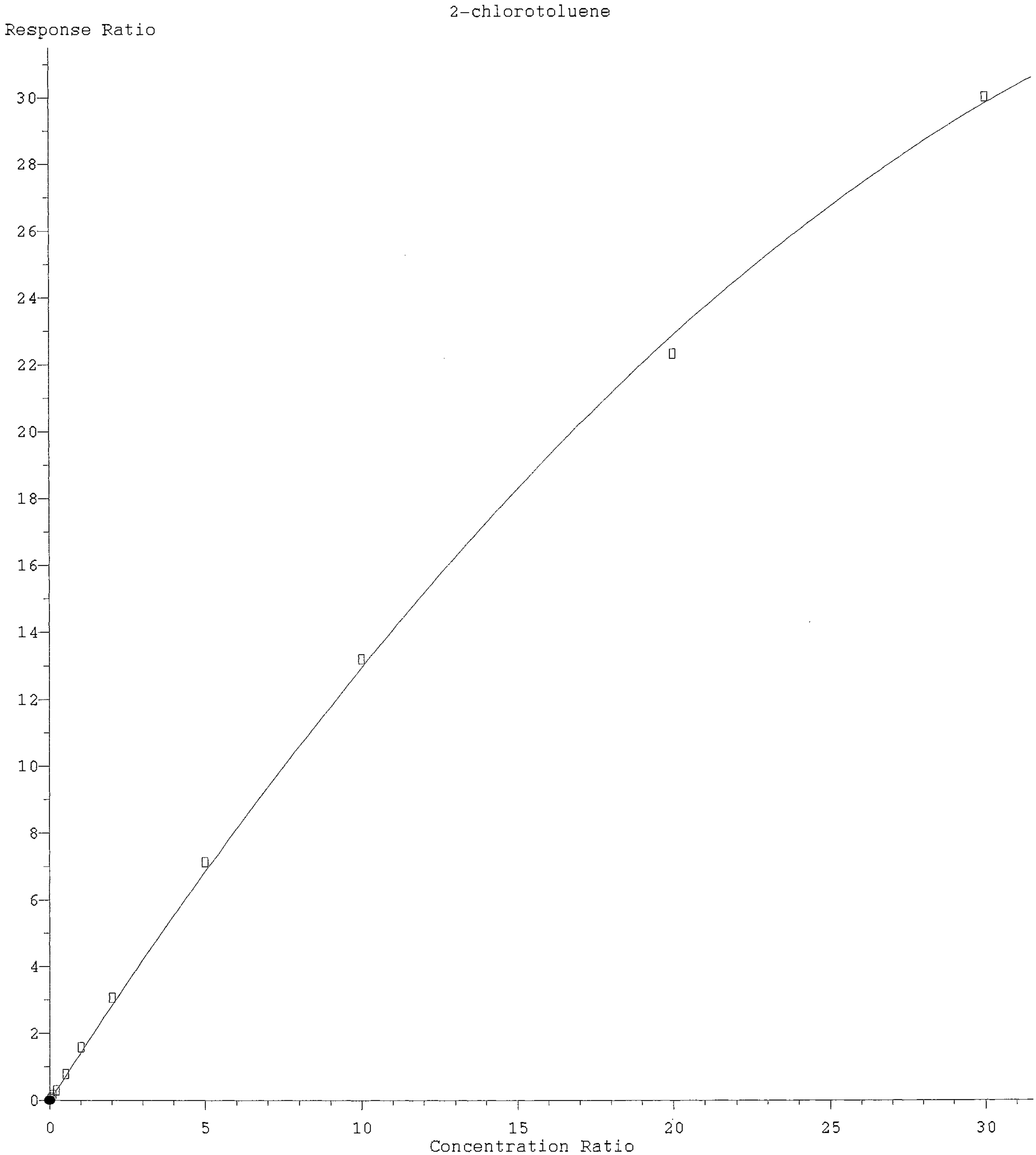
t-1,4-dichloro-2-butene



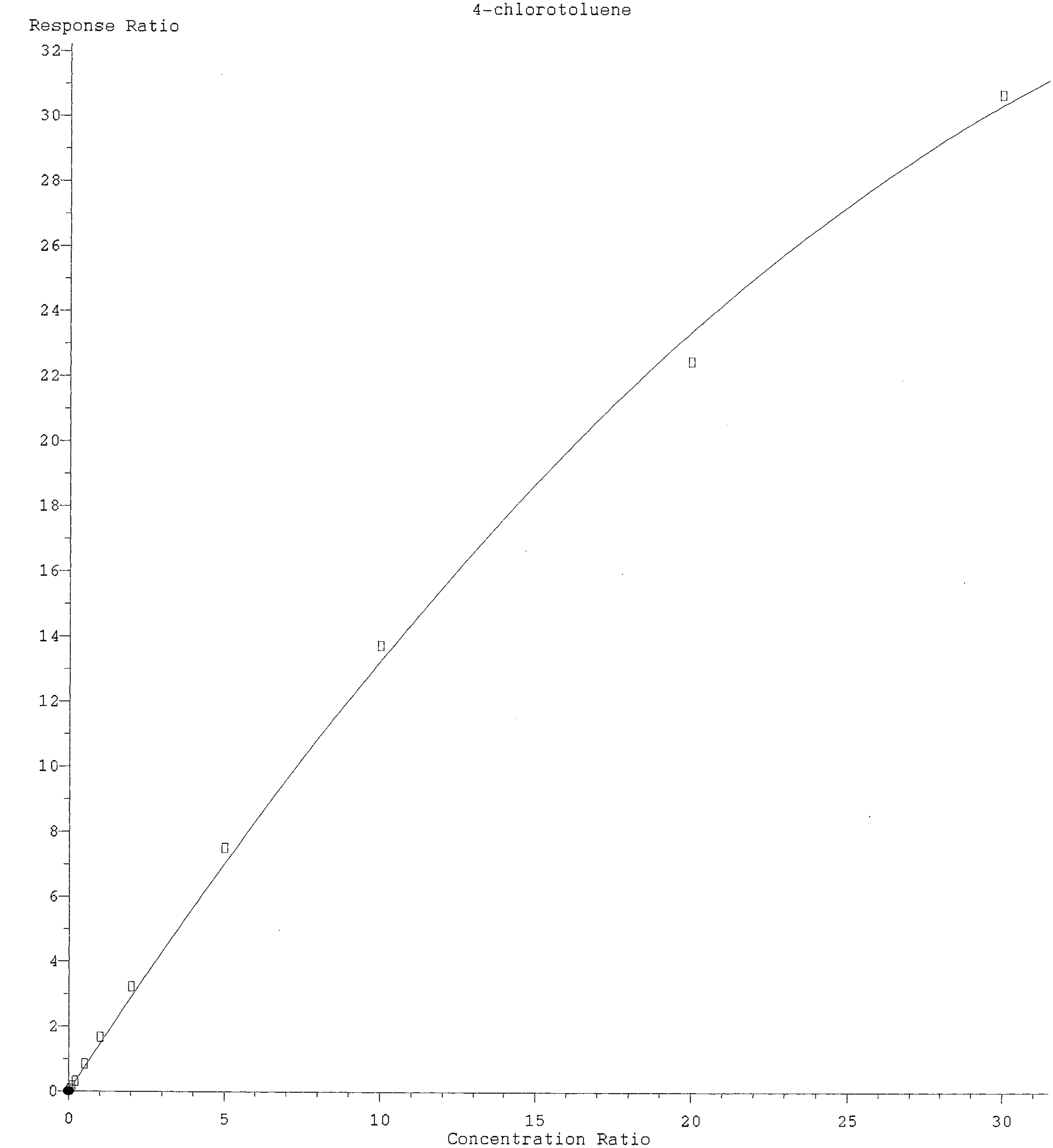
Response = 1.051e-001 * Amt
Coef of Det (r^2) = 0.999 Curve Fit: Linear/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



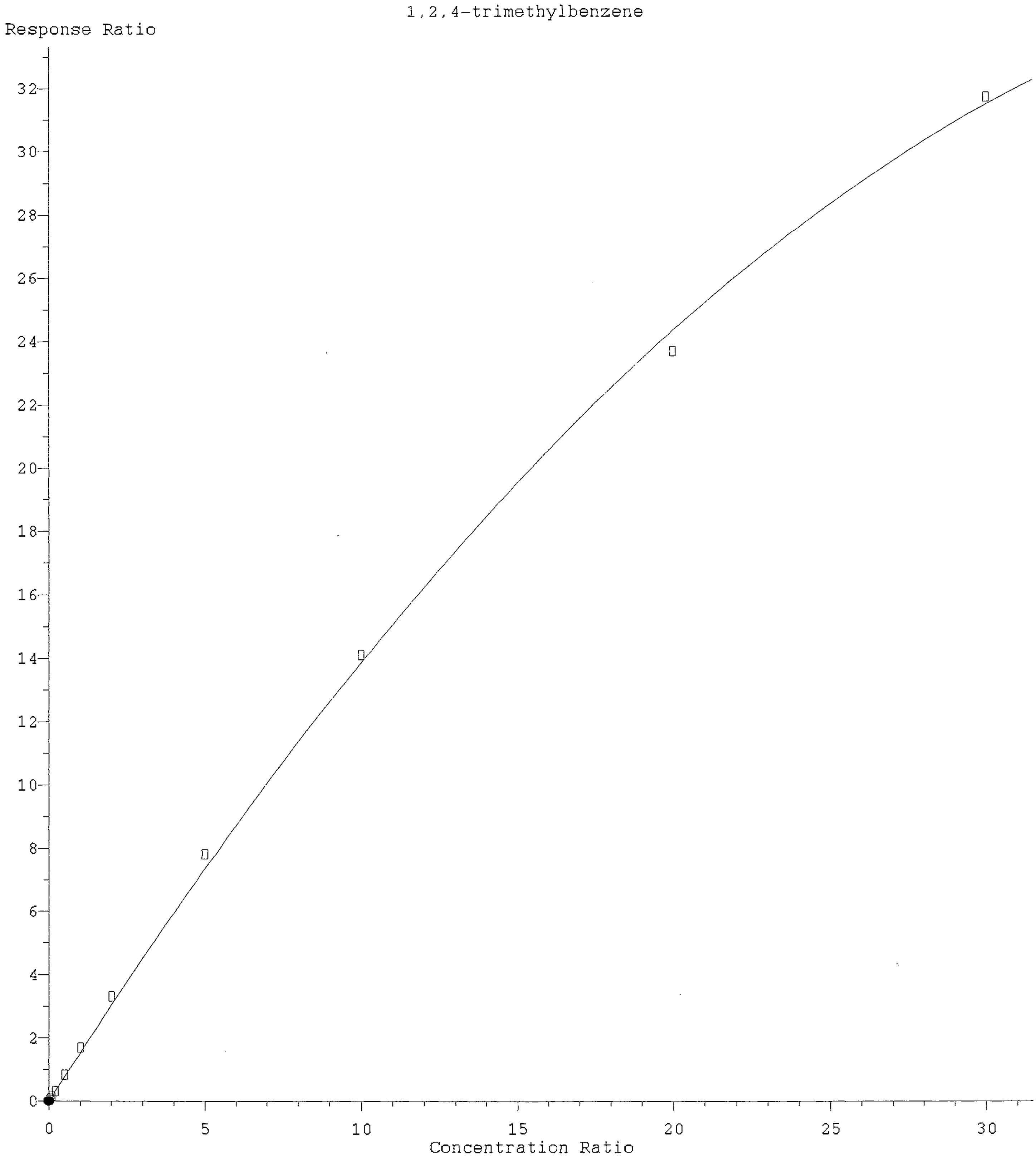
R = -2.746e-002 A*A + 2.090e+000 A + 0.000e+000
Coef of Det (r^2) = 0.999   Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



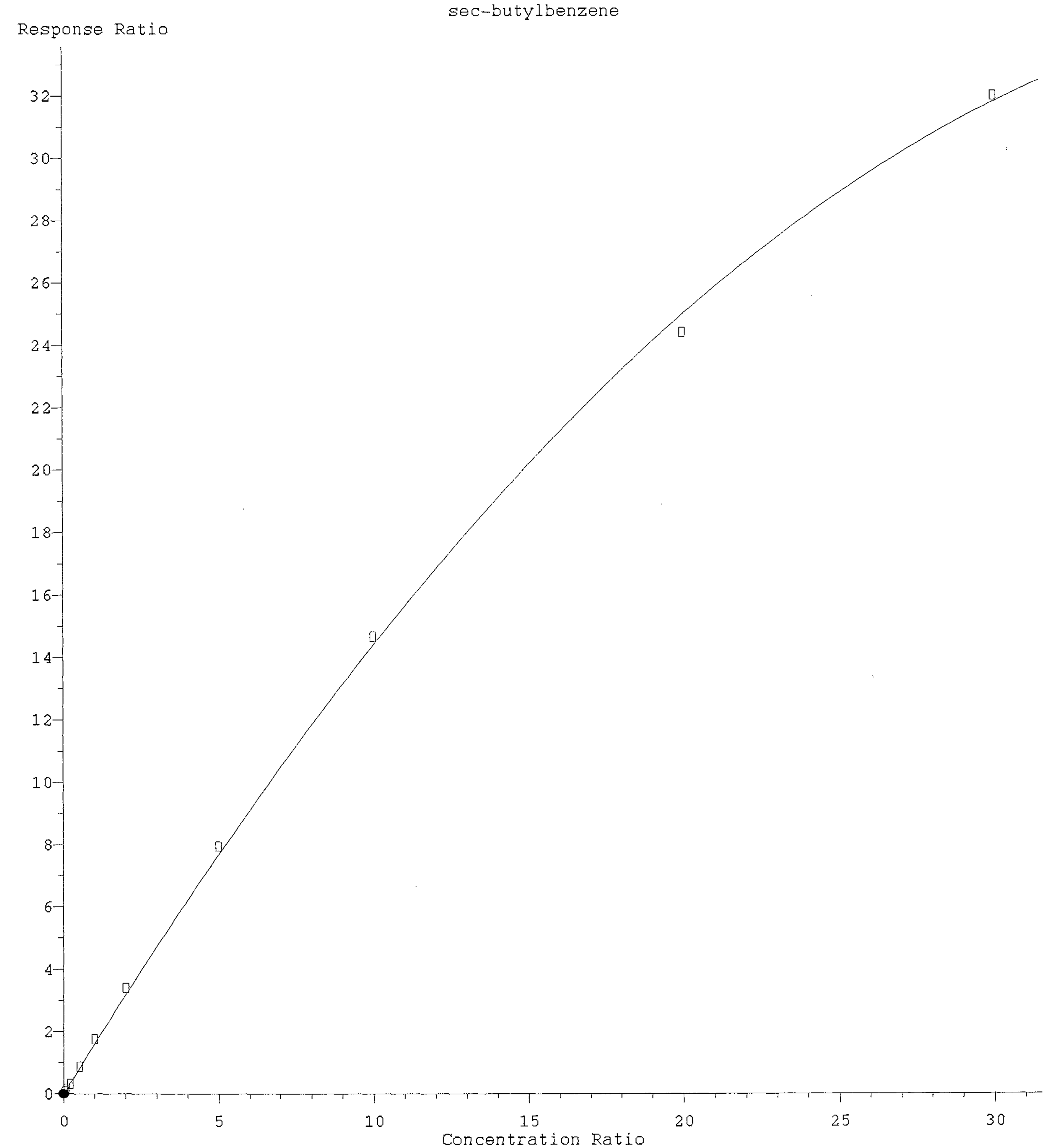
R = -1.502e-002 A*A + 1.444e+000 A + 0.000e+000
Coef of Det (r^2) = 1.000   Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



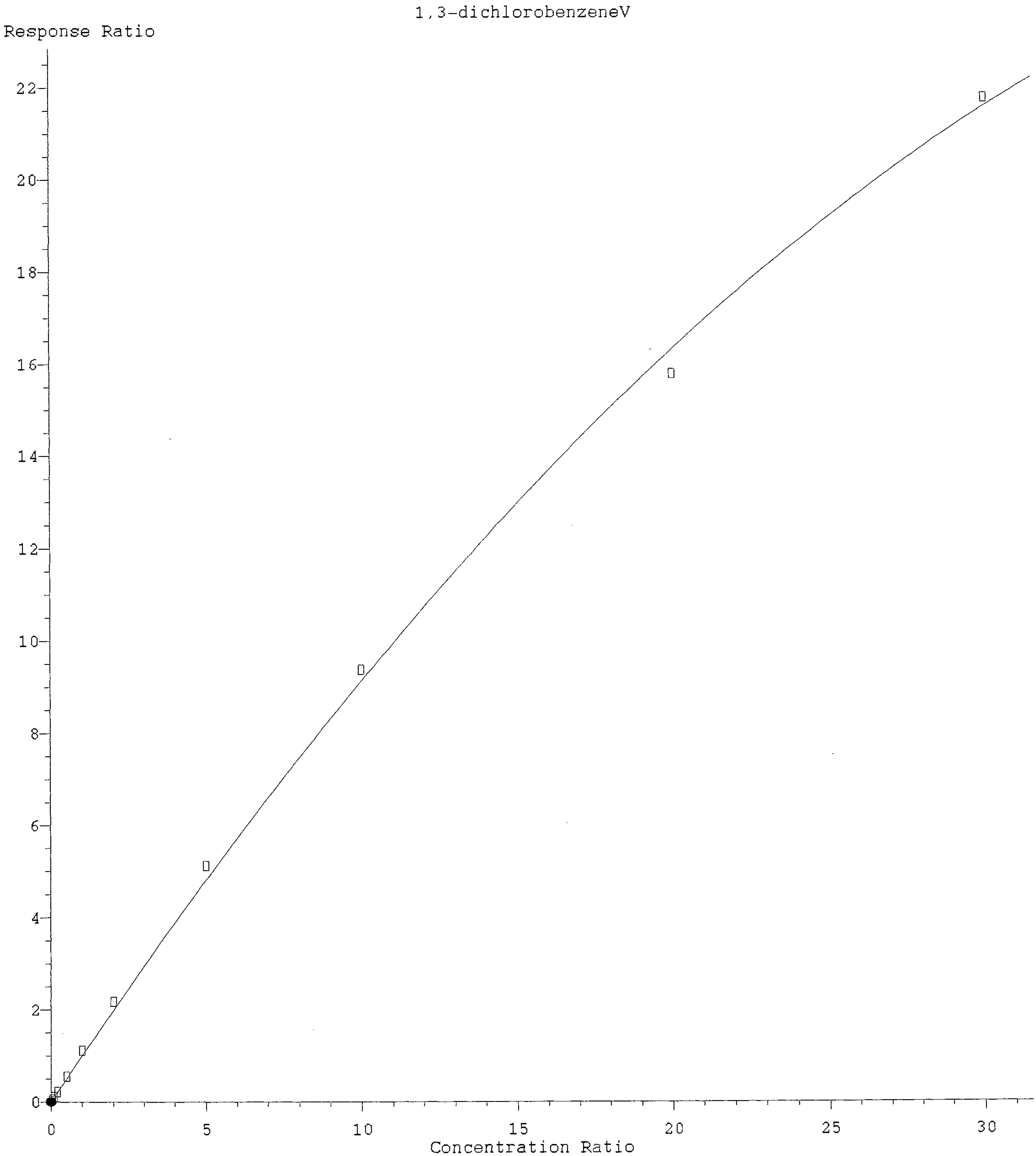
R = -1.574e-002 A*A + 1.484e+000 A + 0.000e+000
Coef of Det (r^2) = 0.999 Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



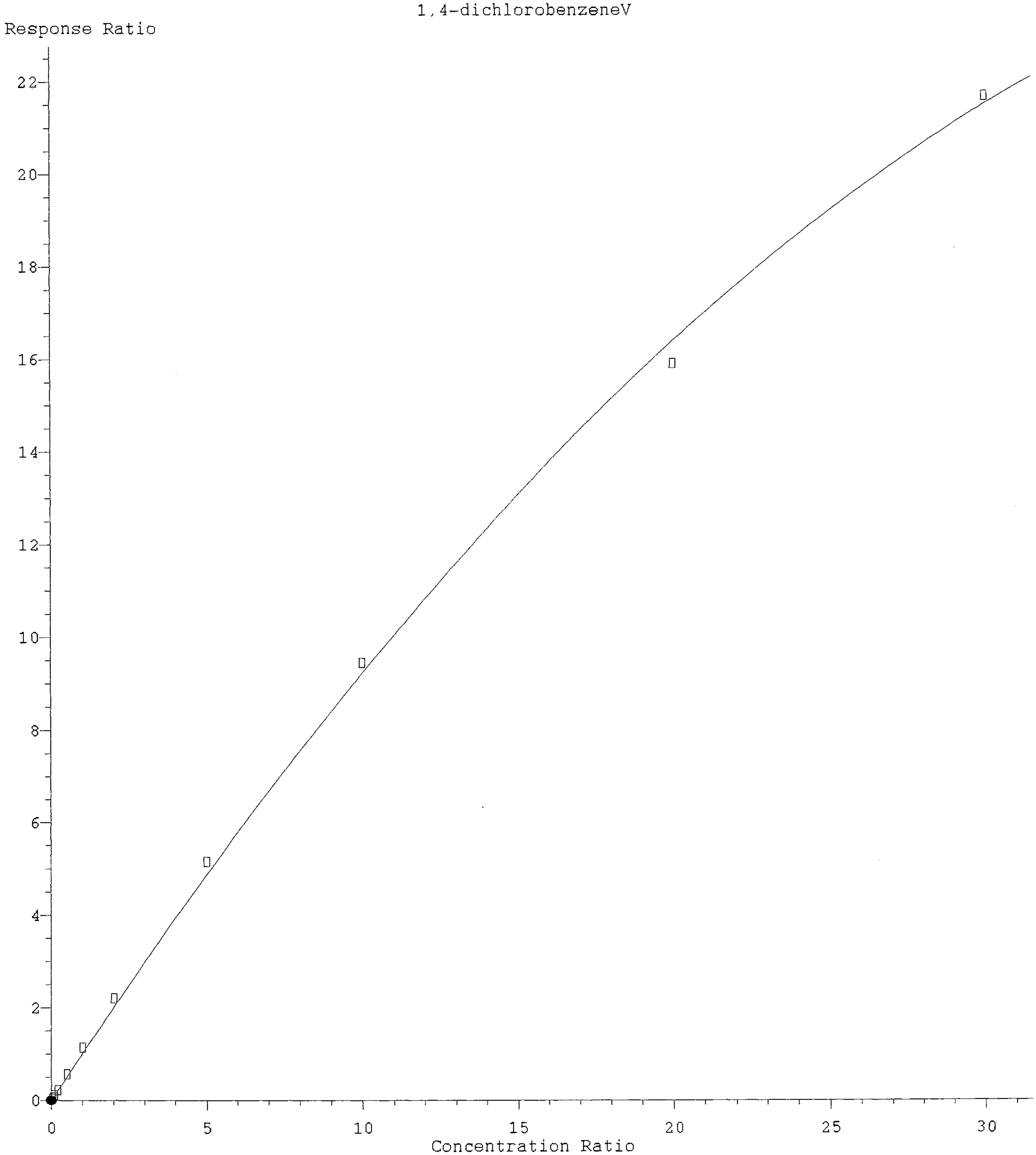
R = -1.684e-002 A*A + 1.555e+000 A + 0.000e+000
Coef of Det (r^2) = 0.999   Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



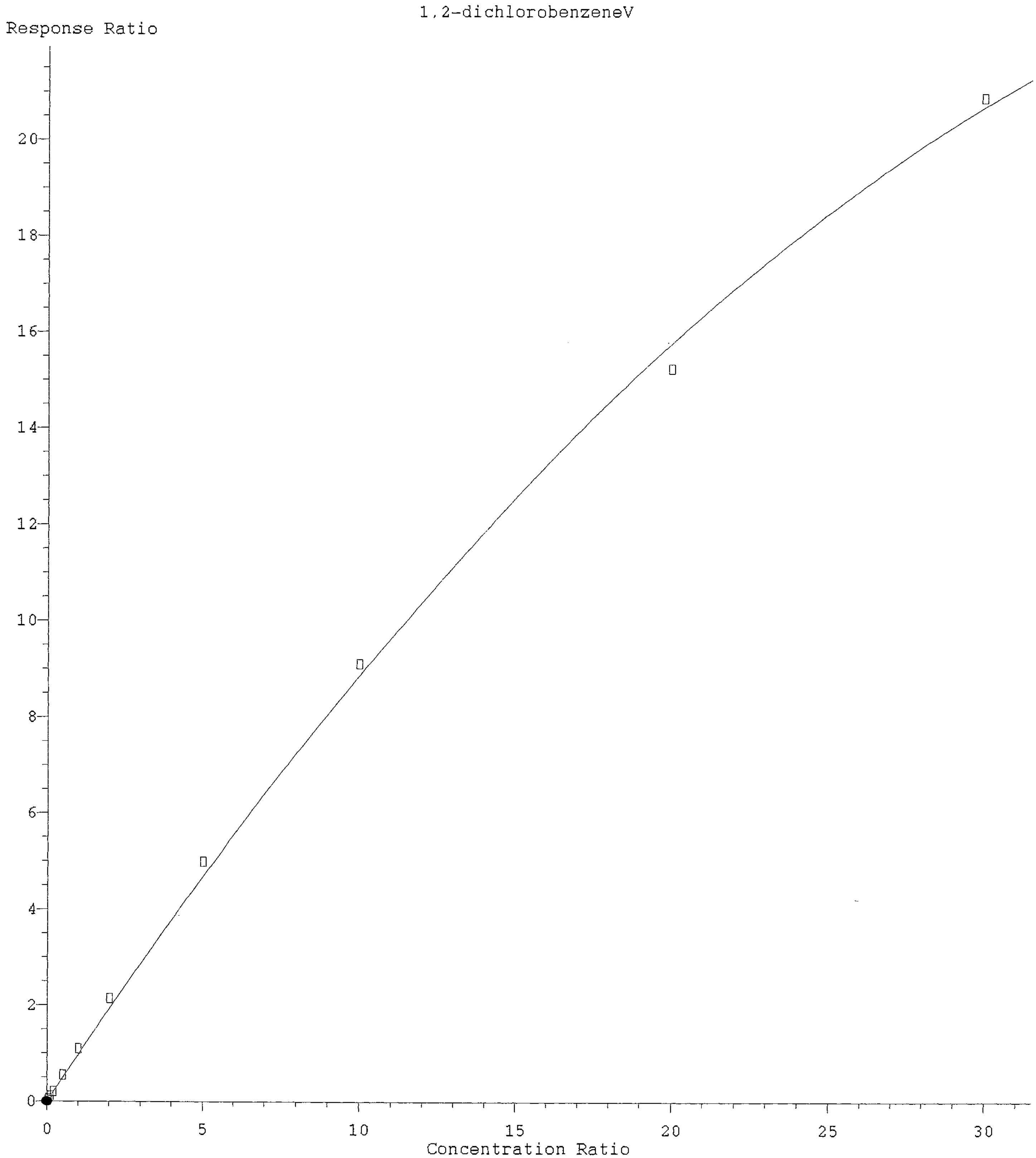
R = -1.893e-002 A*A + 1.627e+000 A + 0.000e+000
Coef of Det (r^2) = 1.000 Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



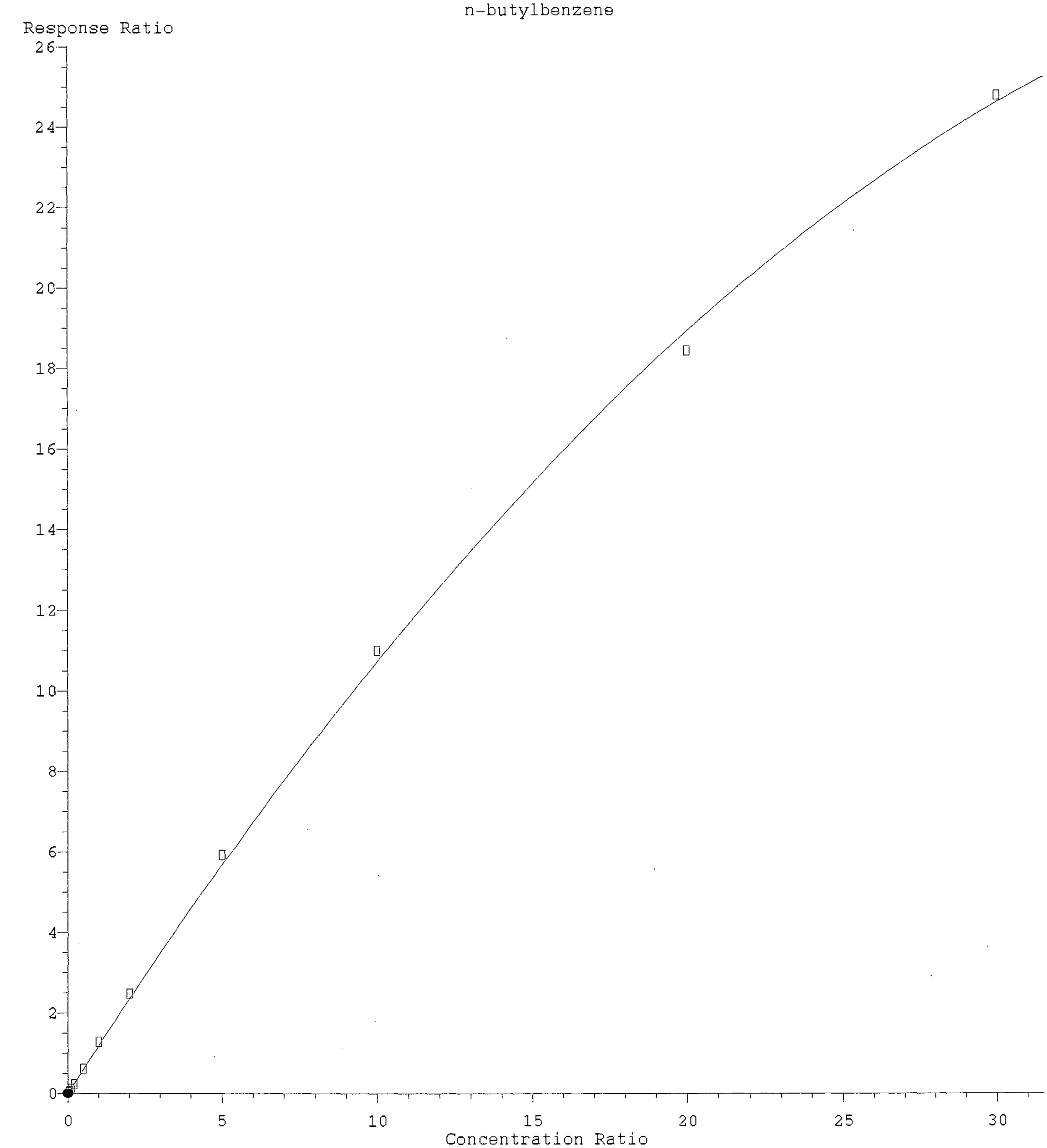
R = -9.691e-003 A*A + 1.009e+000 A + 0.000e+000
Coef of Det (r^2) = 0.999 Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



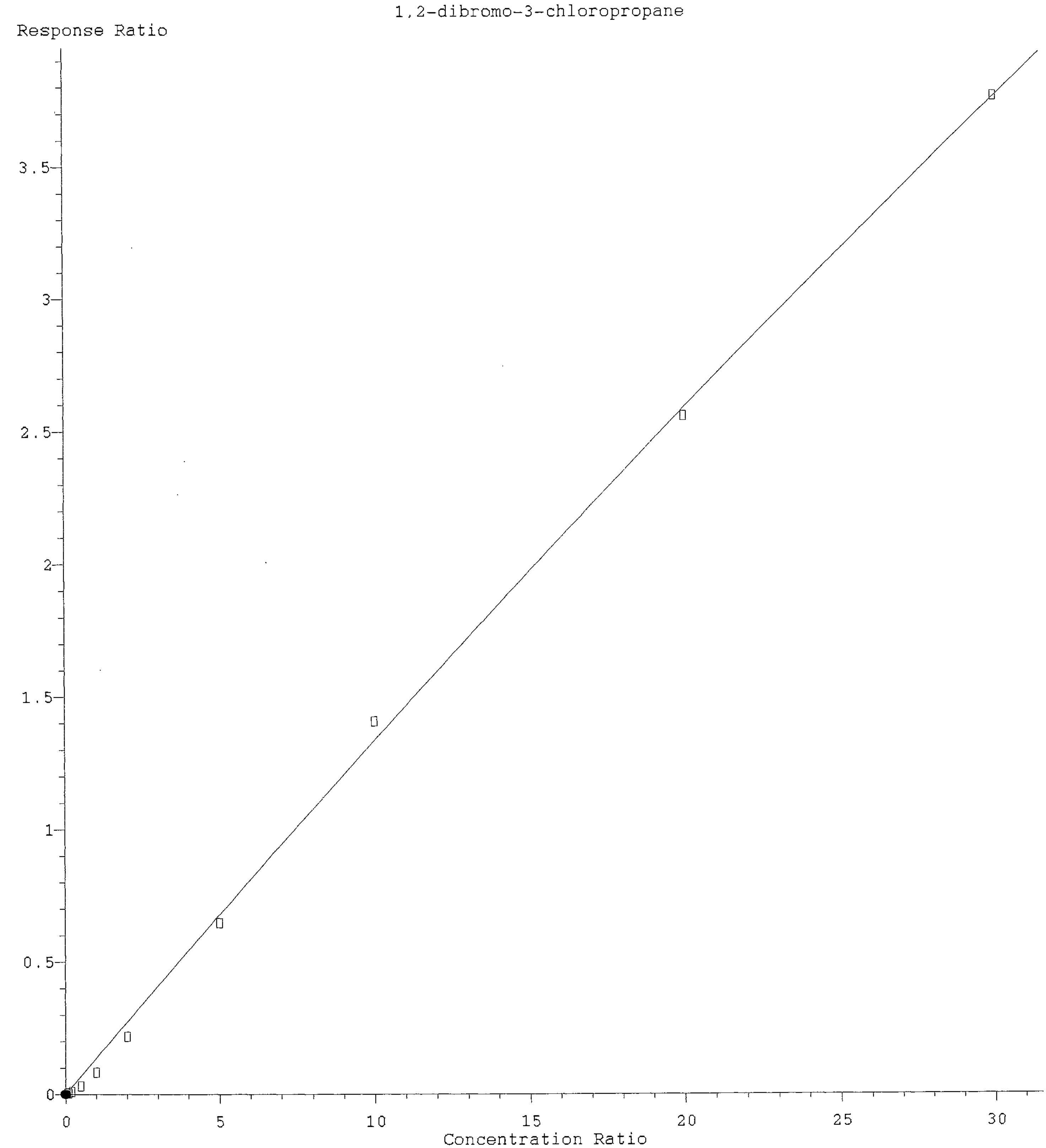
R = -1.029e-002 A*A + 1.025e+000 A + 0.000e+000
Coef of Det (r^2) = 0.999 Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



R = -9.871e-003 A*A + 9.858e-001 A + 0.000e+000
Coef of Det (r^2) = 0.999   Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



R = -1.263e-002 A*A + 1.199e+000 A + 0.000e+000
Coef of Det (r^2) = 0.999   Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016



R = -4.091e-004 A*A + 1.375e-001 A + 0.000e+000
Coef of Det (r^2) = 0.999   Curve Fit: Quad/(0,0)
Method Name: C:\msdchem\1\methods\2015\4VID1213.M
Calibration Table Last Updated: Wed Dec 14 07:58:38 2016

Quantitation Report (QT Reviewed)

Sample : STD 0.2
Misc : X1; 5mL;
Data File : SA121302.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 8:33
Operator :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 13 09:13:45 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 07 08:12:30 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.468	96	1019688	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	798745	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	390622	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.625	111	285572	10.31 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 103.10%		
35) SS 1,2-DCA-d4_MS	10.756	65	346895	10.96 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 109.60%		
48) SS Toluene-d8_MS	14.260	98	1028017	10.19 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.90%		
65) SS 4-BFB_MS	17.789	95	397990	10.20 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.00%		
83) SS 1,2-DCB-d4_MS	19.462	152	377482	10.09 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.90%		
90) SS 2,5-DBT_MS	22.899	250	1879	0.22 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery = 0.55%#		

Target Compounds	R.T.	QIon	Response	Conc Units		Qvalue
2) dichlorodifluoromethane	2.623	85	5056m	0.24 ug/L		
3) chloromethane	2.927	50	7347m	0.33 ug/L		
4) vinyl chloride	3.067	62	6259m	0.38 ug/L		
7) trichlorofluoromethane	4.150	101	6971	0.25 ug/L		95
8) diethyl ether	4.600	59	4044	0.23 ug/L	#	69
9) 1,1,2-Trichlorotrifluo...	4.837	101	2922m	0.24 ug/L		
12) 1,1-dichloroethene	5.153	96	3022	0.20 ug/L	#	77
15) methylene chloride	6.060	84	8115	0.45 ug/L		88
16) carbon disulfide	6.066	76	15278	0.26 ug/L	#	92
17) acrylonitrile	6.303	53	2834m	0.40 ug/L		
18) Methyl-t-butyl ether(M...	6.382	73	18054	0.35 ug/L		96
19) trans-1,2-dichloroethene	6.632	96	4905	0.24 ug/L		89
20) hexane	6.747	57	4881m	0.25 ug/L		
21) Isopropyl ether(DIPE)	7.319	45	14643	0.19 ug/L	#	88
23) 1,1-dichloroethane	7.508	63	7861	0.20 ug/L		98
24) Ethyl-t-butyl ether(ETBE)	8.165	59	7343	0.11 ug/L	#	80
26) cis-1,2-dichloroethene	8.791	96	4577	0.19 ug/L		93
28) bromochloromethane	9.503	128	2279	0.20 ug/L		93
30) chloroform	9.150	83	8373m	0.22 ug/L		
32) 1,1,1-trichloroethane	10.014	97	4391	0.14 ug/L	#	86
33) carbon tetrachloride	10.586	117	2705m	0.10 ug/L		
34) 1,1-dichloropropene	10.361	75	6155m	0.23 ug/L		
36) tert-amyl methyl ether...	10.714	73	6570m	0.11 ug/L		
37) benzene	10.981	78	19105	0.24 ug/L		94
38) 1,2-dichloroethane	10.969	62	7631	0.25 ug/L		93
39) trichloroethene	12.265	95	5160	0.24 ug/L		88
40) 1,2-dichloropropane	12.594	63	4493	0.20 ug/L	#	77
42) dibromomethane	13.092	93	2928	0.21 ug/L		94
43) bromodichloromethane	13.001	83	5051	0.18 ug/L		92
44) 2-Chloroethoxyethene	13.549	63	1394	0.15 ug/L	#	89
46) cis-1,3-dichloropropene	13.908	75	4161	0.12 ug/L	#	90
49) toluene	14.376	91	18211	0.23 ug/L		100
51) 1,1,2-trichloroethane	14.881	83	3574	0.22 ug/L		89
52) 2-hexanone	14.930	43	2622	0.15 ug/L	#	73
53) tetrachloroethene	15.301	166	5190	0.24 ug/L		95
54) 1,3-dichloropropane	15.228	76	6427	0.20 ug/L		98
55) dibromochloromethane	15.581	129	3145	0.14 ug/L		90
56) 1,2-dibromoethane	15.842	107	3197	0.15 ug/L		98
57) chlorobenzene	16.378	112	12409	0.22 ug/L		98

Quantitation Report (QT Reviewed)

Sample : STD 0.2
Misc : X1; 5mL;
Data File : SA121302.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 8:33
Operator :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 13 09:13:45 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 07 08:12:30 2016
Response via : Initial Calibration

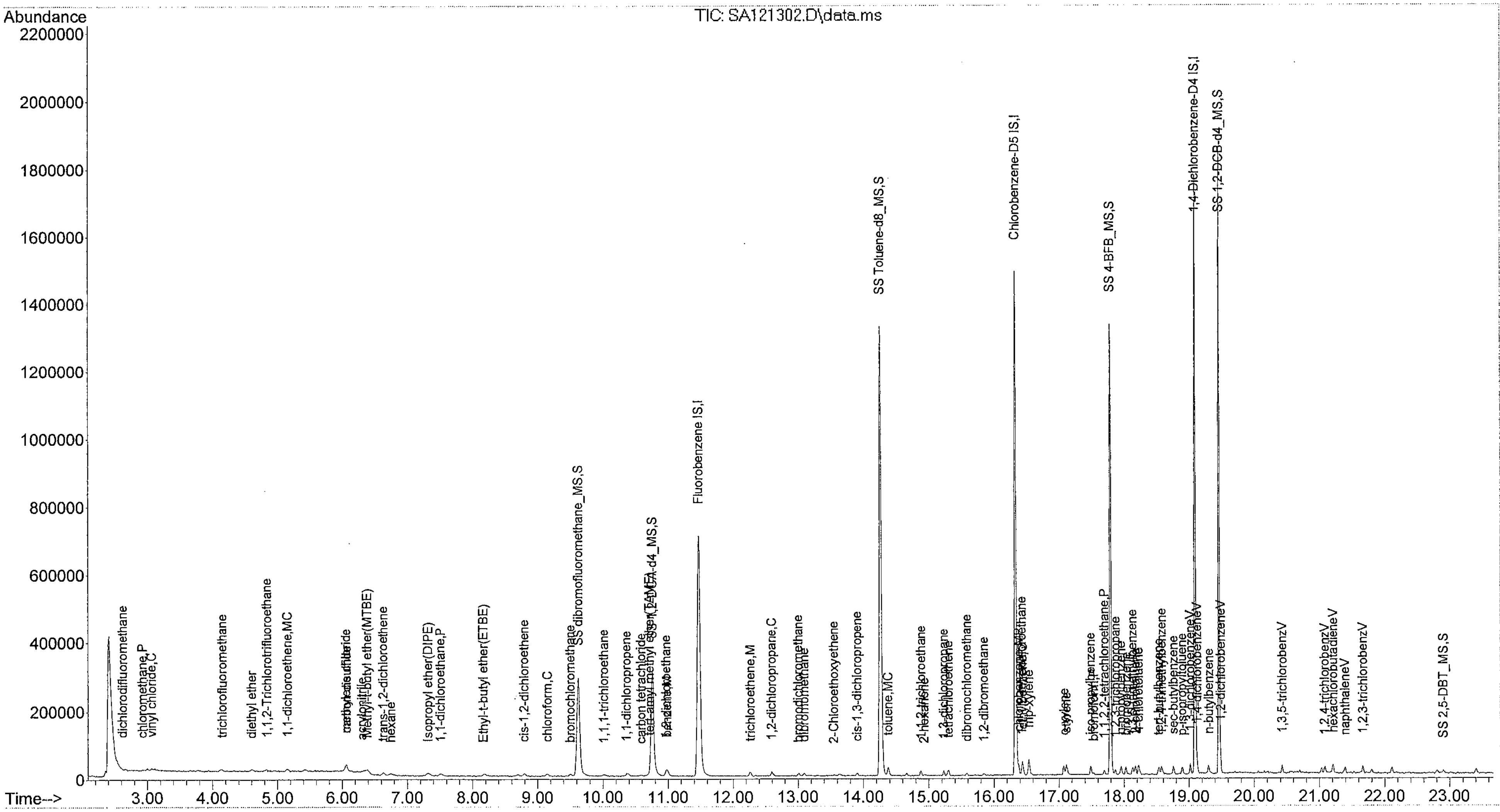
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
58)	1,1,1,2-tetrachloroethane	16.426	131	2659	0.13 ug/L #	67
59)	ethylbenzene	16.438	91	20160	0.23 ug/L	95
60)	mp-xylene	16.536	106	14609	0.45 ug/L	91
61)	o-xylene	17.077	106	7655	0.22 ug/L	98
62)	styrene	17.114	104	11654	0.20 ug/L #	87
63)	bromoform	17.533	173	2203	0.13 ug/L #	87
64)	iso-propylbenzene	17.485	105	15770	0.22 ug/L	97
67)	bromobenzene	18.032	156	5937	0.23 ug/L	94
68)	1,1,2,2-tetrachloroethane	17.698	83	4895	0.20 ug/L #	83
69)	1,2,3-trichloropropane	17.868	110	1665	0.23 ug/L	88
71)	n-propylbenzene	17.953	91	18206	0.23 ug/L	98
72)	2-chlorotoluene	18.172	91	12974	0.24 ug/L	92
73)	4-chlorotoluene	18.221	91	14215	0.25 ug/L	94
74)	1,3,5-trimethylbenzene	18.130	105	13051	0.23 ug/L	99
75)	tert-butylbenzene	18.531	119	10085	0.23 ug/L	99
76)	1,2,4-trimethylbenzene	18.574	105	14117	0.24 ug/L	92
77)	sec-butylbenzene	18.756	105	14804	0.25 ug/L	99
78)	1,3-dichlorobenzeneV	19.018	146	9774	0.25 ug/L	93
79)	p-isopropyltoluene	18.890	119	11985	0.22 ug/L	96
80)	1,4-dichlorobenzeneV	19.121	146	10384	0.26 ug/L #	70
81)	1,2-dichlorobenzeneV	19.486	146	8619	0.22 ug/L #	1
82)	n-butylbenzene	19.304	91	11515	0.26 ug/L	93
85)	1,3,5-trichlorobenzV	20.429	180	5762	0.23 ug/L	97
86)	1,2,4-trichlorobenzV	21.080	180	5511	0.24 ug/L #	85
87)	hexachlorobutadieneV	21.208	225	4030	0.35 ug/L	90
88)	naphthaleneV	21.390	128	11869	0.23 ug/L	100
89)	1,2,3-trichlorobenzV	21.664	180	4546	0.22 ug/L #	80

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Sample : STD 0.2
Misc : X1; 5mL;
Data File : SA121302.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 8:33
Operator :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 13 09:13:45 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 07 08:12:30 2016
Response via : Initial Calibration



Sample : STD 0.5
Misc : X1; 5mL;
Data File : SA121303.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 9:08
Operator :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 13 11:17:32 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 07 08:12:30 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.474	96	1015597	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	780190	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	381239	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.625	111	286580	10.38 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 103.80%		
35) SS 1,2-DCA-d4_MS	10.756	65	349960	11.11 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 111.10%		
48) SS Toluene-d8_MS	14.260	98	1014982	10.30 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 103.00%		
65) SS 4-BFB_MS	17.789	95	389712	10.22 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.20%		
83) SS 1,2-DCB-d4_MS	19.462	152	378716	10.37 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 103.70%		
90) SS 2,5-DBT_MS	22.905	250	3543	0.43 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery = 1.08%#		
Target Compounds					Qvalue
2) dichlorodifluoromethane	2.616	85	14921m	0.72 ug/L	
3) chloromethane	2.945	50	15533	0.69 ug/L	90
4) vinyl chloride	3.067	62	12583m	0.78 ug/L	
5) bromomethane	3.663	94	3670m	0.65 ug/L	
6) chloroethane	3.772	64	5827	0.53 ug/L #	88
7) trichlorofluoromethane	4.125	101	18425	0.66 ug/L	100
8) diethyl ether	4.606	59	8803	0.50 ug/L	86
9) 1,1,2-Trichlorotrifluo...	4.825	101	8139	0.68 ug/L #	91
11) acetone	4.953	43	6768m	0.78 ug/L	
12) 1,1-dichloroethene	5.141	96	8137	0.55 ug/L	92
13) tert-Butyl Alcohol(TBA)	5.415	59	3660m	1.87 ug/L	
15) methylene chloride	6.054	84	15994m	0.89 ug/L	
16) carbon disulfide	6.060	76	31628	0.55 ug/L #	97
18) Methyl-t-butyl ether(M...	6.376	73	43054	0.83 ug/L #	92
19) trans-1,2-dichloroethene	6.619	96	9821	0.49 ug/L	91
20) hexane	6.759	57	13951	0.71 ug/L	87
21) Isopropyl ether(DIPE)	7.319	45	36575	0.48 ug/L	96
22) vinyl acetate	7.538	43	12561	0.23 ug/L #	94
23) 1,1-dichloroethane	7.502	63	18626	0.48 ug/L	98
24) Ethyl-t-butyl ether(ETBE)	8.165	59	16486	0.25 ug/L	94
25) 2,2-dichloropropane	8.694	77	5537	0.18 ug/L #	66
26) cis-1,2-dichloroethene	8.803	96	11412	0.49 ug/L	98
27) 2-butanone(MEK)	8.457	43	7853	0.62 ug/L	95
28) bromochloromethane	9.503	128	5493	0.49 ug/L	96
29) Tetrahydrofuran(THF)	9.637	42	3881m	0.61 ug/L	
30) chloroform	9.138	83	19606	0.53 ug/L #	92
32) 1,1,1-trichloroethane	10.002	97	10068	0.33 ug/L #	84
33) carbon tetrachloride	10.580	117	6221	0.24 ug/L #	96
34) 1,1-dichloropropene	10.379	75	14350	0.54 ug/L #	84
36) tert-amyl methyl ether...	10.689	73	15580m	0.26 ug/L	
37) benzene	10.981	78	42175	0.54 ug/L	94
38) 1,2-dichloroethane	10.975	62	17678	0.57 ug/L	98
39) trichloroethene	12.265	95	11083	0.52 ug/L	99
40) 1,2-dichloropropane	12.600	63	10476	0.47 ug/L #	83
42) dibromomethane	13.098	93	6924	0.50 ug/L	97
43) bromodichloromethane	13.007	83	12653	0.46 ug/L	95
44) 2-Chloroethoxyethene	13.555	63	2991	0.33 ug/L	96
45) 4-methyl-2-pentanone(M...	13.622	58	3131	0.36 ug/L	91
46) cis-1,3-dichloropropene	13.908	75	9800	0.29 ug/L	97

Sample : STD 0.5
Misc : X1; 5mL;
Data File : SA121303.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 9:08
Operator :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 13 11:17:32 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 07 08:12:30 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49)	toluene	14.376	91	42476	0.55	ug/L		96
50)	trans-1,3-dichloropropene	14.662	75	6585	0.20	ug/L	#	94
51)	1,1,2-trichloroethane	14.875	83	7719	0.48	ug/L		94
52)	2-hexanone	14.930	43	6077	0.37	ug/L		97
53)	tetrachloroethene	15.301	166	11247	0.53	ug/L		93
54)	1,3-dichloropropane	15.228	76	16581	0.54	ug/L		97
55)	dibromochloromethane	15.581	129	7766	0.35	ug/L		99
56)	1,2-dibromoethane	15.842	107	7322	0.36	ug/L		94
57)	chlorobenzene	16.378	112	29618	0.55	ug/L		98
58)	1,1,1,2-tetrachloroethane	16.432	131	5668	0.28	ug/L	#	64
59)	ethylbenzene	16.438	91	44677	0.53	ug/L		100
60)	mp-xylene	16.536	106	33998	1.07	ug/L		90
61)	o-xylene	17.071	106	17677	0.52	ug/L		96
62)	styrene	17.114	104	28971	0.50	ug/L		97
63)	bromoform	17.533	173	4734	0.30	ug/L	#	94
64)	iso-propylbenzene	17.491	105	37060	0.54	ug/L		95
67)	bromobenzene	18.026	156	13608	0.55	ug/L		98
68)	1,1,2,2-tetrachloroethane	17.692	83	11879	0.50	ug/L		98
69)	1,2,3-trichloropropane	17.862	110	4029	0.58	ug/L		96
70)	t-1,4-dichloro-2-butene	17.935	53	1486	0.37	ug/L	#	37
71)	n-propylbenzene	17.953	91	41234	0.54	ug/L		98
72)	2-chlorotoluene	18.172	91	31343	0.59	ug/L		95
73)	4-chlorotoluene	18.221	91	32480	0.59	ug/L		100
74)	1,3,5-trimethylbenzene	18.130	105	28329	0.51	ug/L		98
75)	tert-butylbenzene	18.531	119	23902	0.55	ug/L		98
76)	1,2,4-trimethylbenzene	18.580	105	30960	0.53	ug/L		95
77)	sec-butylbenzene	18.762	105	30339	0.53	ug/L		98
78)	1,3-dichlorobenzeneV	19.018	146	21481	0.56	ug/L		98
79)	p-isopropyltoluene	18.896	119	26790	0.52	ug/L		93
80)	1,4-dichlorobenzeneV	19.121	146	23189	0.60	ug/L	#	72
81)	1,2-dichlorobenzeneV	19.486	146	21451	0.57	ug/L	#	71
82)	n-butylbenzene	19.298	91	23319	0.54	ug/L		96
84)	1,2-dibromo-3-chloropr...	20.204	75	1213	0.27	ug/L	#	75
85)	1,3,5-trichlorobenzV	20.429	180	13067	0.53	ug/L		98
86)	1,2,4-trichlorobenzV	21.080	180	11817	0.52	ug/L		96
87)	hexachlorobutadieneV	21.208	225	6362	0.56	ug/L		93
88)	naphthaleneV	21.390	128	22710	0.46	ug/L		96
89)	1,2,3-trichlorobenzV	21.664	180	10581	0.51	ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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Sample     : STD 0.5
Misc       : X1; 5mL;
Data File  : SA121303.D
Data Path  : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On     : 13 Dec 2016   9:08
Operator   :
ALS Vial   : 3   Sample Multiplier: 1

Quant Time: Dec 13 11:17:32 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 07 08:12:30 2016
Response via : Initial Calibration
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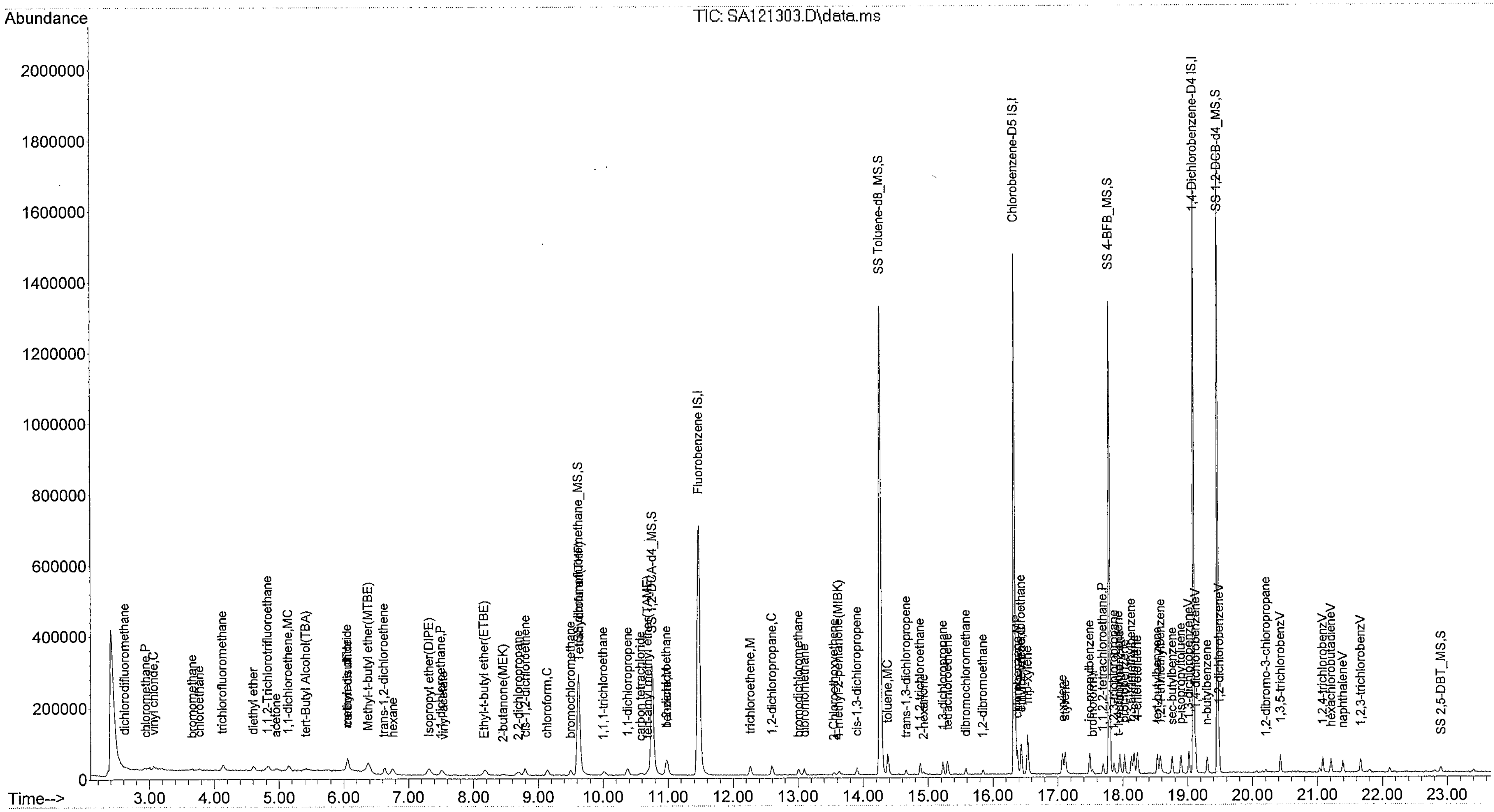

4VID1213.M Thu Dec 22 13:39:47 2016 Page: 3

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Sample     : STD 1.0
Misc       : X1; 5mL;
Data File  : SA121304.D
Data Path  : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On     : 13 Dec 2016   9:43
Operator   :
ALS Vial   : 4   Sample Multiplier: 1

Quant Time: Dec 13 11:19:38 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 07 08:12:30 2016
Response via : Initial Calibration
```

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.474	96	998886	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	782272	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	391541	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.625	111	285957	10.54 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	105.40%	
35) SS 1,2-DCA-d4_MS	10.756	65	346517	11.18 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	111.80%	
48) SS Toluene-d8_MS	14.261	98	1008174	10.21 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	102.10%	
65) SS 4-BFB_MS	17.789	95	396574	10.38 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	103.80%	
83) SS 1,2-DCB-d4_MS	19.462	152	383163	10.21 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	102.10%	
90) SS 2,5-DBT_MS	22.899	250	7242	0.86 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery =	2.15%#	
Target Compounds					Qvalue
2) dichlorodifluoromethane	2.623	85	22542m	1.10 ug/L	
3) chloromethane	2.939	50	24946	1.13 ug/L	98
4) vinyl chloride	3.067	62	19206	1.21 ug/L	93
5) bromomethane	3.663	94	4918	0.88 ug/L #	61
6) chloroethane	3.766	64	11511	1.07 ug/L	96
7) trichlorofluoromethane	4.137	101	30858	1.12 ug/L	95
8) diethyl ether	4.600	59	19650	1.13 ug/L	97
9) 1,1,2-Trichlorotrifluo...	4.831	101	12307	1.04 ug/L	94
10) acrolein	4.819	56	3348	1.25 ug/L #	60
11) acetone	4.953	43	10212m	1.19 ug/L	
12) 1,1-dichloroethene	5.153	96	15744	1.09 ug/L	97
13) tert-Butyl Alcohol(TBA)	5.397	59	9100m	4.74 ug/L	
14) iodomethane	5.725	142	3083	0.41 ug/L #	85
15) methylene chloride	6.048	84	23223	1.32 ug/L	95
16) carbon disulfide	6.066	76	64704	1.13 ug/L	99
17) acrylonitrile	6.321	53	7078	1.02 ug/L #	67
18) Methyl-t-butyl ether(M...	6.376	73	88294	1.74 ug/L #	83
19) trans-1,2-dichloroethene	6.626	96	21523	1.08 ug/L	98
20) hexane	6.759	57	19892m	1.04 ug/L	
21) Isopropyl ether(DIPE)	7.307	45	76816	1.03 ug/L	98
22) vinyl acetate	7.538	43	23865	0.45 ug/L	96
23) 1,1-dichloroethane	7.502	63	38788	1.02 ug/L #	71
24) Ethyl-t-butyl ether(ETBE)	8.177	59	34015	0.52 ug/L	97
25) 2,2-dichloropropane	8.682	77	9814	0.32 ug/L	94
26) cis-1,2-dichloroethene	8.791	96	24219	1.05 ug/L	96
27) 2-butanone(MEK)	8.457	43	11734	0.94 ug/L #	93
28) bromochloromethane	9.497	128	11618	1.04 ug/L	98
29) Tetrahydrofuran(THF)	9.625	42	6874	1.10 ug/L #	68
30) chloroform	9.138	83	39956	1.09 ug/L	98
32) 1,1,1-trichloroethane	10.014	97	19472	0.65 ug/L #	86
33) carbon tetrachloride	10.574	117	12631	0.50 ug/L	98
34) 1,1-dichloropropene	10.379	75	27784	1.06 ug/L #	79
36) tert-amyl methyl ether...	10.702	73	29489	0.51 ug/L #	29
37) benzene	10.988	78	86084	1.12 ug/L	93
38) 1,2-dichloroethane	10.975	62	35289	1.16 ug/L	97
39) trichloroethene	12.259	95	21755	1.04 ug/L	96
40) 1,2-dichloropropane	12.594	63	21883	0.99 ug/L #	89
42) dibromomethane	13.092	93	15102	1.11 ug/L	96
43) bromodichloromethane	13.007	83	23979	0.89 ug/L	98

Quantitation Report (QT Reviewed)

Sample : STD 1.0
Misc : X1; 5mL;
Data File : SA121304.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 9:43
Operator :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 13 11:19:38 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 07 08:12:30 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 2-Chloroethoxyethene	13.555	63	5893	0.66 ug/L	95
45) 4-methyl-2-pentanone(M...	13.616	58	6367	0.75 ug/L	92
46) cis-1,3-dichloropropene	13.908	75	19890	0.59 ug/L	95
49) toluene	14.382	91	88116	1.15 ug/L	99
50) trans-1,3-dichloropropene	14.662	75	12753	0.40 ug/L	95
51) 1,1,2-trichloroethane	14.875	83	17633	1.09 ug/L	92
52) 2-hexanone	14.924	43	11561	0.70 ug/L #	88
53) tetrachloroethene	15.295	166	22137	1.04 ug/L	93
54) 1,3-dichloropropane	15.228	76	32934	1.06 ug/L	97
55) dibromochloromethane	15.581	129	15653	0.71 ug/L	98
56) 1,2-dibromoethane	15.848	107	15999	0.78 ug/L	97
57) chlorobenzene	16.378	112	61792	1.14 ug/L	98
58) 1,1,1,2-tetrachloroethane	16.432	131	12024	0.60 ug/L #	65
59) ethylbenzene	16.438	91	94938	1.12 ug/L	97
60) mp-xylene	16.536	106	70140	2.20 ug/L	91
61) o-xylene	17.071	106	35572	1.04 ug/L	97
62) styrene	17.114	104	62433	1.08 ug/L	97
63) bromoform	17.527	173	9912	0.62 ug/L	96
64) iso-propylbenzene	17.491	105	75198	1.09 ug/L	97
67) bromobenzene	18.032	156	27026	1.06 ug/L	95
68) 1,1,2,2-tetrachloroethane	17.698	83	25814	1.07 ug/L	99
69) 1,2,3-trichloropropane	17.868	110	7385	1.04 ug/L	97
70) t-1,4-dichloro-2-butene	17.935	53	2965	0.73 ug/L #	1
71) n-propylbenzene	17.953	91	86575	1.11 ug/L	100
72) 2-chlorotoluene	18.172	91	63801	1.17 ug/L	97
73) 4-chlorotoluene	18.221	91	67019	1.20 ug/L	98
74) 1,3,5-trimethylbenzene	18.130	105	60588	1.06 ug/L	100
75) tert-butylbenzene	18.531	119	47370	1.06 ug/L	99
76) 1,2,4-trimethylbenzene	18.580	105	64358	1.08 ug/L	96
77) sec-butylbenzene	18.756	105	65040	1.10 ug/L	100
78) 1,3-dichlorobenzeneV	19.018	146	43345	1.10 ug/L	95
79) p-isopropyltoluene	18.896	119	55635	1.04 ug/L	99
80) 1,4-dichlorobenzeneV	19.121	146	43588	1.09 ug/L #	70
81) 1,2-dichlorobenzeneV	19.486	146	43958	1.14 ug/L #	27
82) n-butylbenzene	19.298	91	46187	1.04 ug/L	96
84) 1,2-dibromo-3-chloropr...	20.204	75	1891	0.40 ug/L	100
85) 1,3,5-trichlorobenzV	20.429	180	26954	1.06 ug/L	94
86) 1,2,4-trichlorobenzV	21.080	180	24063	1.03 ug/L	99
87) hexachlorobutadieneV	21.208	225	11504	0.99 ug/L	96
88) naphthaleneV	21.390	128	48072	0.95 ug/L	100
89) 1,2,3-trichlorobenzV	21.664	180	20860	0.99 ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)


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Sample       : STD 1.0
Misc         : X1; 5mL;
Data File    : SA121304.D
Data Path    : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On       : 13 Dec 2016   9:43
Operator     :
ALS Vial     : 4   Sample Multiplier: 1

Quant Time: Dec 13 11:19:38 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 07 08:12:30 2016
Response via : Initial Calibration
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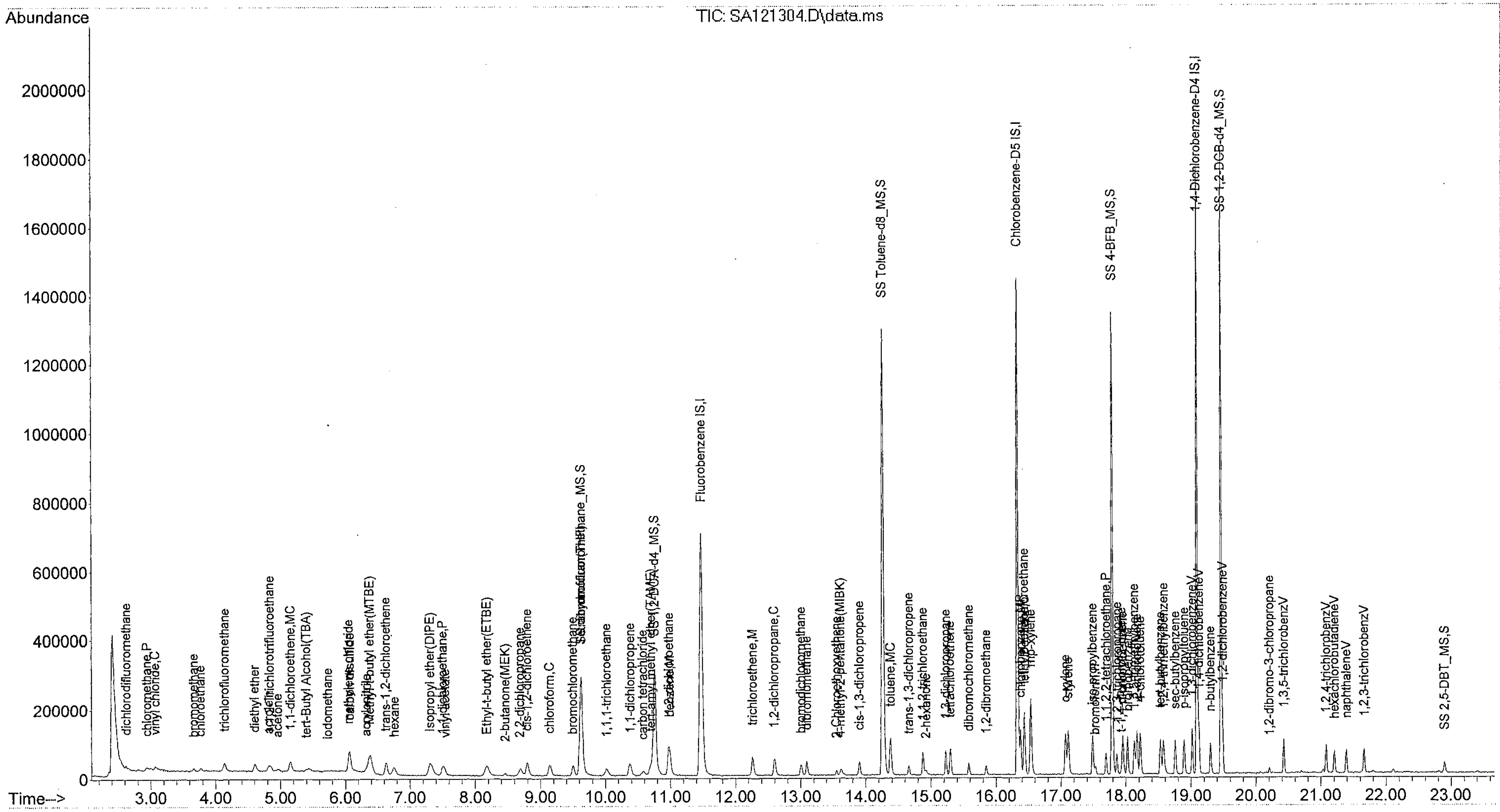

Quantitation Report (QT Reviewed)

Sample : STD 2.0
Misc : X1; 5mL;
Data File : SA121305.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 10:19
Operator :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 13 11:21:00 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 07 08:12:30 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.474	96	1006744	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	773819	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	387809	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.625	111	282219	10.32 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 103.20%	
35) SS 1,2-DCA-d4_MS	10.756	65	348041	11.14 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 111.40%	
48) SS Toluene-d8_MS	14.261	98	1011969	10.36 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 103.60%	
65) SS 4-BFB_MS	17.789	95	398104	10.53 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 105.30%	
83) SS 1,2-DCB-d4_MS	19.462	152	376166	10.12 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 101.20%	
90) SS 2,5-DBT_MS	22.899	250	13916	1.67 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery	= 4.17%#	

Target Compounds	R.T.	QIon	Response	Conc Units	Qvalue
2) dichlorodifluoromethane	2.617	85	54445m	2.64 ug/L	
3) chloromethane	2.945	50	52232	2.36 ug/L	93
4) vinyl chloride	3.067	62	42163	2.65 ug/L	90
5) bromomethane	3.657	94	11822m	2.10 ug/L	
6) chloroethane	3.766	64	20811	1.92 ug/L #	87
7) trichlorofluoromethane	4.131	101	67580	2.44 ug/L	100
8) diethyl ether	4.606	59	37353	2.14 ug/L	95
9) 1,1,2-Trichlorotrifluo...	4.819	101	30740	2.58 ug/L	98
10) acrolein	4.819	56	6333	2.34 ug/L	93
11) acetone	4.959	43	23289	2.70 ug/L	100
12) 1,1-dichloroethene	5.147	96	30949	2.12 ug/L	91
13) tert-Butyl Alcohol(TBA)	5.391	59	17955m	9.27 ug/L	
14) iodomethane	5.725	142	5641	0.75 ug/L #	83
15) methylene chloride	6.060	84	40546	2.28 ug/L	84
16) carbon disulfide	6.066	76	120510	2.10 ug/L #	98
17) acrylonitrile	6.315	53	18884m	2.69 ug/L	
18) Methyl-t-butyl ether(M...	6.382	73	164887	3.22 ug/L #	94
19) trans-1,2-dichloroethene	6.626	96	40031	1.99 ug/L	100
20) hexane	6.759	57	52616	2.72 ug/L	99
21) Isopropyl ether(DIPE)	7.313	45	136764	1.82 ug/L	98
22) vinyl acetate	7.532	43	47084	0.88 ug/L	98
23) 1,1-dichloroethane	7.502	63	72459	1.89 ug/L	100
24) Ethyl-t-butyl ether(ETBE)	8.171	59	61031	0.92 ug/L #	91
25) 2,2-dichloropropane	8.688	77	17411	0.56 ug/L #	90
26) cis-1,2-dichloroethene	8.791	96	45085	1.94 ug/L	97
27) 2-butanone(MEK)	8.457	43	27484	2.19 ug/L #	85
28) bromochloromethane	9.503	128	21837	1.95 ug/L	97
29) Tetrahydrofuran(THF)	9.631	42	12238	1.94 ug/L	98
30) chloroform	9.144	83	75818	2.05 ug/L	98
32) 1,1,1-trichloroethane	10.026	97	36359	1.20 ug/L #	84
33) carbon tetrachloride	10.574	117	25229	0.99 ug/L	94
34) 1,1-dichloropropene	10.373	75	54113	2.05 ug/L	99
36) tert-amyl methyl ether...	10.696	73	56197	0.96 ug/L #	27
37) benzene	10.981	78	163397	2.11 ug/L	98
38) 1,2-dichloroethane	10.975	62	66897	2.18 ug/L	100
39) trichloroethene	12.259	95	41883	1.99 ug/L	98
40) 1,2-dichloropropane	12.600	63	40371	1.81 ug/L #	85
42) dibromomethane	13.092	93	28687	2.09 ug/L	96
43) bromodichloromethane	13.001	83	43576	1.61 ug/L	97

Quantitation Report (QT Reviewed)

Sample : STD 2.0
Misc : X1; 5mL;
Data File : SA121305.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 10:19
Operator :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 13 11:21:00 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 07 08:12:30 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44)	2-Chloroethoxyethene	13.555	63	10922	1.22 ug/L	98
45)	4-methyl-2-pentanone(M...	13.616	58	13526	1.58 ug/L	92
46)	cis-1,3-dichloropropene	13.908	75	38272	1.13 ug/L	94
49)	toluene	14.376	91	165724	2.18 ug/L	97
50)	trans-1,3-dichloropropene	14.662	75	23813	0.75 ug/L	95
51)	1,1,2-trichloroethane	14.875	83	32123	2.00 ug/L	98
52)	2-hexanone	14.918	43	24296	1.48 ug/L #	93
53)	tetrachloroethene	15.301	166	44307	2.09 ug/L	98
54)	1,3-dichloropropane	15.228	76	63375	2.07 ug/L	99
55)	dibromochloromethane	15.581	129	30160	1.38 ug/L	98
56)	1,2-dibromoethane	15.848	107	31830	1.57 ug/L	94
57)	chlorobenzene	16.378	112	112630	2.11 ug/L	97
58)	1,1,1,2-tetrachloroethane	16.432	131	22758	1.14 ug/L	97
59)	ethylbenzene	16.438	91	174425	2.09 ug/L	99
60)	mp-xylene	16.536	106	131564	4.17 ug/L	92
61)	o-xylene	17.071	106	67291	1.98 ug/L	98
62)	styrene	17.114	104	116549	2.05 ug/L	99
63)	bromoform	17.533	173	19198	1.21 ug/L	96
64)	iso-propylbenzene	17.491	105	144516	2.12 ug/L	98
67)	bromobenzene	18.026	156	52876	2.10 ug/L	98
68)	1,1,2,2-tetrachloroethane	17.692	83	50633	2.11 ug/L	97
69)	1,2,3-trichloropropane	17.862	110	14137	2.00 ug/L	92
70)	t-1,4-dichloro-2-butene	17.935	53	5609	1.39 ug/L #	39
71)	n-propylbenzene	17.953	91	167927	2.18 ug/L	99
72)	2-chlorotoluene	18.172	91	116001	2.16 ug/L	99
73)	4-chlorotoluene	18.221	91	123909	2.23 ug/L	100
74)	1,3,5-trimethylbenzene	18.130	105	114419	2.02 ug/L	97
75)	tert-butylbenzene	18.531	119	91196	2.06 ug/L	100
76)	1,2,4-trimethylbenzene	18.574	105	121446	2.05 ug/L	97
77)	sec-butylbenzene	18.756	105	124355	2.13 ug/L	98
78)	1,3-dichlorobenzeneV	19.018	146	84699	2.18 ug/L	99
79)	p-isopropyltoluene	18.896	119	105856	2.00 ug/L	99
80)	1,4-dichlorobenzeneV	19.121	146	85666	2.17 ug/L #	93
81)	1,2-dichlorobenzeneV	19.486	146	80685	2.12 ug/L #	83
82)	n-butylbenzene	19.298	91	90023	2.04 ug/L	96
84)	1,2-dibromo-3-chloropr...	20.204	75	4064	0.88 ug/L	91
85)	1,3,5-trichlorobenzV	20.429	180	51004	2.02 ug/L	97
86)	1,2,4-trichlorobenzV	21.080	180	45368	1.95 ug/L	96
87)	hexachlorobutadieneV	21.208	225	22186	1.93 ug/L	99
88)	naphthaleneV	21.390	128	98996	1.97 ug/L	99
89)	1,2,3-trichlorobenzV	21.664	180	42276	2.02 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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Sample      : STD 2.0
Misc        : X1; 5mL;
Data File   : SA121305.D
Data Path   : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On      : 13 Dec 2016   10:19
Operator    :
ALS Vial    : 5   Sample Multiplier: 1

Quant Time: Dec 13 11:21:00 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 07 08:12:30 2016
Response via : Initial Calibration
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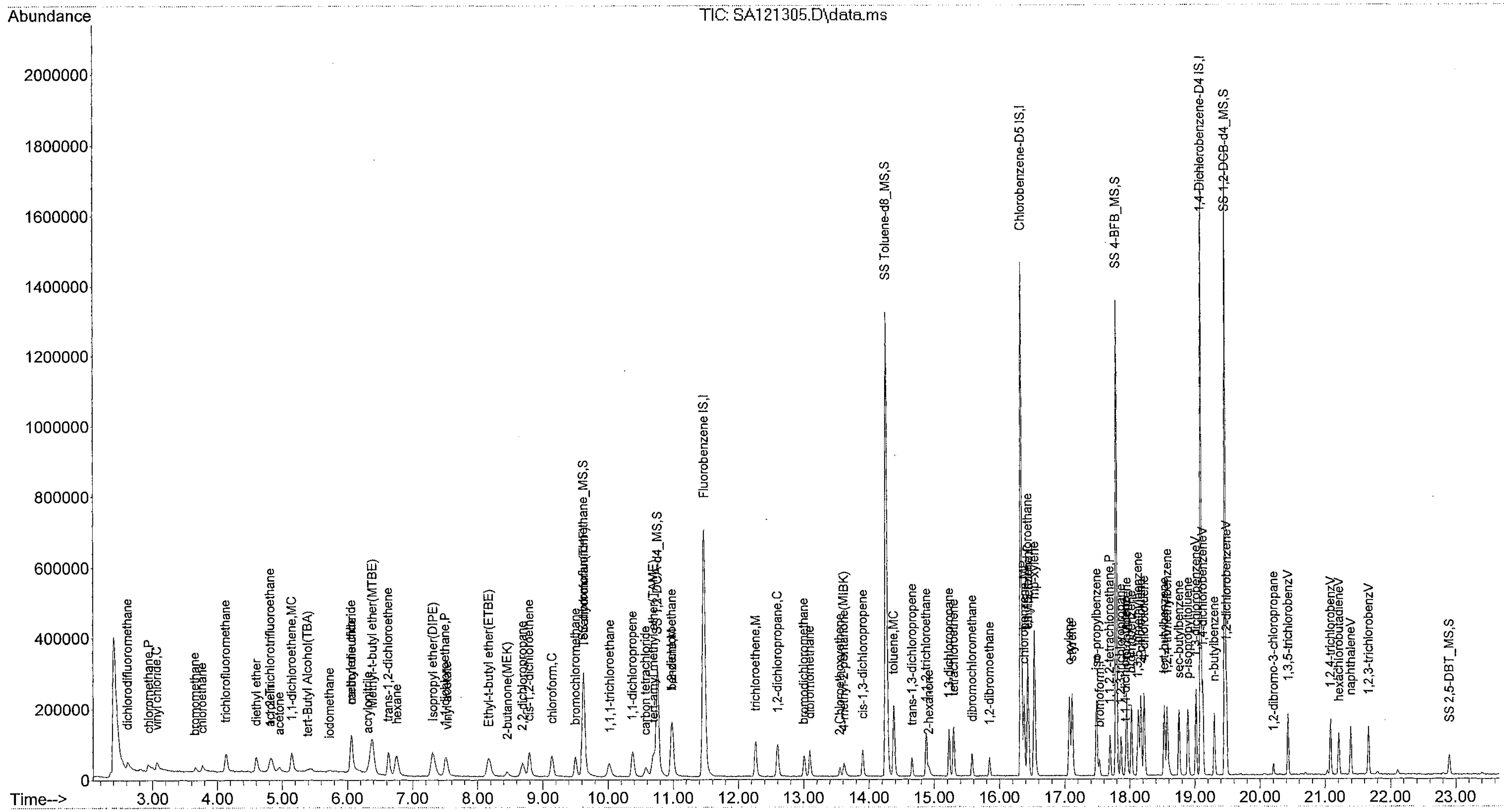

96

Quantitation Report (QT Reviewed)

Sample : STD 5.0
Misc : X1; 5mL;
Data File : SA121306.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 10:54
Operator :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 13 11:21:53 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 07 08:12:30 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.468	96	987209	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	773443	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	389883	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.619	111	283230	10.56 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 105.60%		
35) SS 1,2-DCA-d4_MS	10.756	65	343624	11.22 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 112.20%		
48) SS Toluene-d8_MS	14.261	98	1001289	10.25 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.50%		
65) SS 4-BFB_MS	17.789	95	391617	10.36 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 103.60%		
83) SS 1,2-DCB-d4_MS	19.462	152	372618	9.97 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.70%		
90) SS 2,5-DBT_MS	22.905	250	36121	4.32 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery = 10.80%#		

Target Compounds	R.T.	QIon	Response	Conc Units	Qvalue
2) dichlorodifluoromethane	2.623	85	120207	5.94 ug/L #	88
3) chloromethane	2.933	50	125521	5.77 ug/L	100
4) vinyl chloride	3.067	62	104307	6.82 ug/L #	86
5) bromomethane	3.663	94	30995	5.60 ug/L	99
6) chloroethane	3.766	64	64939	6.10 ug/L	98
7) trichlorofluoromethane	4.138	101	172133	6.33 ug/L	94
8) diethyl ether	4.600	59	99034	5.78 ug/L	97
9) 1,1,2-Trichlorotrifluo...	4.831	101	67967	5.83 ug/L	97
10) acrolein	4.807	56	13101	4.94 ug/L	95
11) acetone	4.947	43	52923	6.23 ug/L	98
12) 1,1-dichloroethene	5.153	96	83810	5.85 ug/L	96
13) tert-Butyl Alcohol(TBA)	5.385	59	36980m	19.47 ug/L	
14) iodomethane	5.719	142	22463	3.04 ug/L #	84
15) methylene chloride	6.054	84	109588	6.30 ug/L	97
16) carbon disulfide	6.066	76	321751	5.71 ug/L	100
17) acrylonitrile	6.315	53	45164	6.56 ug/L	96
18) Methyl-t-butyl ether(M...	6.370	73	428404	8.53 ug/L #	94
19) trans-1,2-dichloroethene	6.632	96	107703	5.47 ug/L	96
20) hexane	6.753	57	106041	5.58 ug/L	95
21) Isopropyl ether(DIPE)	7.307	45	376745	5.10 ug/L	98
22) vinyl acetate	7.532	43	127522	2.44 ug/L	99
23) 1,1-dichloroethane	7.502	63	199910	5.33 ug/L	97
24) Ethyl-t-butyl ether(ETBE)	8.171	59	158575	2.44 ug/L	99
25) 2,2-dichloropropane	8.688	77	50010	1.63 ug/L	100
26) cis-1,2-dichloroethene	8.791	96	118967	5.23 ug/L	96
27) 2-butanone(MEK)	8.445	43	60705	4.94 ug/L	97
28) bromochloromethane	9.503	128	59060	5.37 ug/L	96
29) Tetrahydrofuran(THF)	9.625	42	33683	5.45 ug/L	95
30) chloroform	9.144	83	201998	5.58 ug/L	99
32) 1,1,1-trichloroethane	10.020	97	102877	3.48 ug/L #	87
33) carbon tetrachloride	10.574	117	72740	2.90 ug/L	98
34) 1,1-dichloropropene	10.373	75	148674	5.74 ug/L	98
36) tert-amyl methyl ether...	10.683	73	149182	2.60 ug/L #	29
37) benzene	10.982	78	435963	5.75 ug/L	99
38) 1,2-dichloroethane	10.975	62	172472	5.72 ug/L	99
39) trichloroethene	12.265	95	112840	5.48 ug/L	99
40) 1,2-dichloropropane	12.600	63	108849	4.98 ug/L #	88
41) 1,4-dioxaneV	13.099	88	2290	10.61 ug/L #	44
42) dibromomethane	13.093	93	73610	5.47 ug/L	99

Sample : STD 5.0
Misc : X1; 5mL;
Data File : SA121306.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 10:54
Operator :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 13 11:21:53 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 07 08:12:30 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) bromodichloromethane	13.007	83	124874	4.70 ug/L	98
44) 2-Chloroethoxyethene	13.549	63	30771	3.50 ug/L	96
45) 4-methyl-2-pentanone(M...	13.610	58	35892	4.28 ug/L	90
46) cis-1,3-dichloropropene	13.908	75	106778	3.20 ug/L	95
49) toluene	14.382	91	440555	5.82 ug/L	98
50) trans-1,3-dichloropropene	14.656	75	73720	2.31 ug/L	98
51) 1,1,2-trichloroethane	14.875	83	85586	5.33 ug/L	96
52) 2-hexanone	14.912	43	71330	4.35 ug/L	94
53) tetrachloroethene	15.301	166	116796	5.52 ug/L	98
54) 1,3-dichloropropane	15.228	76	163768	5.36 ug/L	98
55) dibromochloromethane	15.581	129	85497	3.92 ug/L	98
56) 1,2-dibromoethane	15.848	107	91263	4.51 ug/L	100
57) chlorobenzene	16.378	112	290500	5.46 ug/L	96
58) 1,1,1,2-tetrachloroethane	16.432	131	68797	3.46 ug/L	98
59) ethylbenzene	16.438	91	471940	5.69 ug/L	99
60) mp-xylene	16.536	106	356992	11.37 ug/L	93
61) o-xylene	17.071	106	177324	5.24 ug/L	95
62) styrene	17.114	104	311057	5.48 ug/L	97
63) bromoform	17.534	173	54065	3.40 ug/L	98
64) iso-propylbenzene	17.491	105	398695	5.89 ug/L	98
67) bromobenzene	18.026	156	138841	5.48 ug/L	97
68) 1,1,2,2-tetrachloroethane	17.698	83	130206	5.40 ug/L	99
69) 1,2,3-trichloropropane	17.862	110	38637	5.44 ug/L	98
70) t-1,4-dichloro-2-butene	17.929	53	16037	3.94 ug/L #	23
71) n-propylbenzene	17.953	91	451987	5.88 ug/L	99
72) 2-chlorotoluene	18.172	91	310594	5.77 ug/L	98
73) 4-chlorotoluene	18.221	91	333257	6.01 ug/L	98
74) 1,3,5-trimethylbenzene	18.130	105	313989	5.53 ug/L	98
75) tert-butylbenzene	18.531	119	249434	5.59 ug/L	100
76) 1,2,4-trimethylbenzene	18.574	105	326971	5.52 ug/L	97
77) sec-butylbenzene	18.756	105	341535	5.84 ug/L	98
78) 1,3-dichlorobenzeneV	19.018	146	216167	5.55 ug/L	99
79) p-isopropyltoluene	18.896	119	290163	5.49 ug/L	100
80) 1,4-dichlorobenzeneV	19.121	146	220830	5.59 ug/L	94
81) 1,2-dichlorobenzeneV	19.486	146	214810	5.63 ug/L	96
82) n-butylbenzene	19.298	91	242089	5.48 ug/L	97
84) 1,2-dibromo-3-chloropr...	20.204	75	12348	2.65 ug/L	93
85) 1,3,5-trichlorobenzV	20.429	180	132119	5.20 ug/L	99
86) 1,2,4-trichlorobenzV	21.080	180	117906	5.05 ug/L	99
87) hexachlorobutadieneV	21.208	225	58751	5.08 ug/L	96
88) naphthaleneV	21.390	128	252599	5.00 ug/L	99
89) 1,2,3-trichlorobenzV	21.664	180	108948	5.18 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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Sample      : STD 5.0
Misc        : X1; 5mL;
Data File   : SA121306.D
Data Path   : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On      : 13 Dec 2016  10:54
Operator    :
ALS Vial    : 6   Sample Multiplier: 1

Quant Time: Dec 13 11:21:53 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 07 08:12:30 2016
Response via : Initial Calibration
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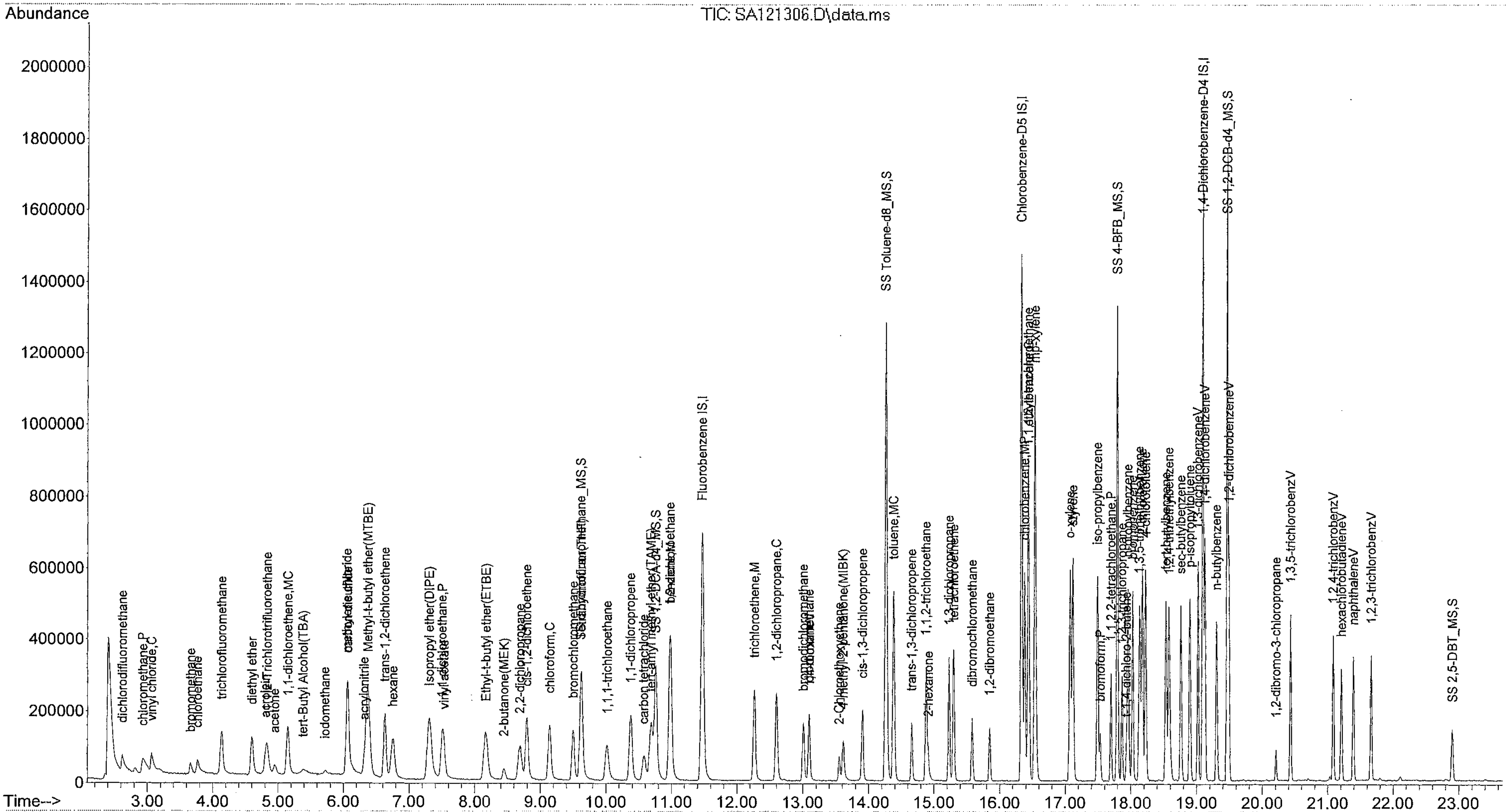


4VID1213.M Thu Dec 22 13:40:07 2016

Page: 3

Sample : STD 10
Misc : X1; 5mL;
Data File : SA121307.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 11:30
Operator :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 13 14:39:48 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Tue Dec 13 11:26:51 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.474	96	1001380	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	773565	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	387485	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.625	111	287511	10.57 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 105.70%		
35) SS 1,2-DCA-d4_MS	10.756	65	340872	10.97 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 109.70%		
48) SS Toluene-d8_MS	14.260	98	1007220	10.31 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 103.10%		
65) SS 4-BFB_MS	17.789	95	394806	10.45 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 104.50%		
83) SS 1,2-DCB-d4_MS	19.462	152	379304	10.22 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.20%		
90) SS 2,5-DBT_MS	22.899	250	73664	8.87 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery = 22.17%#		

Target Compounds	R.T.	QIon	Response	Conc Units	Qvalue
2) dichlorodifluoromethane	2.616	85	214669	10.45 ug/L #	96
3) chloromethane	2.939	50	235074	10.66 ug/L	98
4) vinyl chloride	3.067	62	184517	12.21 ug/L	98
5) bromomethane	3.663	94	64049	11.37 ug/L	86
6) chloroethane	3.766	64	107728	9.97 ug/L #	91
7) trichlorofluoromethane	4.131	101	300310	10.89 ug/L	99
8) diethyl ether	4.600	59	192199	11.05 ug/L	99
9) 1,1,2-Trichlorotrifluo...	4.825	101	122245	10.33 ug/L	98
10) acrolein	4.807	56	29966	11.15 ug/L	88
11) acetone	4.946	43	112446	12.96 ug/L	99
12) 1,1-dichloroethene	5.147	96	165100	11.37 ug/L	94
13) tert-Butyl Alcohol(TBA)	5.372	59	78141	40.57 ug/L #	81
14) iodomethane	5.719	142	58154	7.78 ug/L #	83
15) methylene chloride	6.054	84	216031	12.23 ug/L	97
16) carbon disulfide	6.060	76	645328	11.29 ug/L	100
17) acrylonitrile	6.315	53	86291	12.35 ug/L	94
18) Methyl-t-butyl ether(M...	6.364	73	853301	16.74 ug/L #	94
19) trans-1,2-dichloroethene	6.626	96	216150	10.83 ug/L	97
20) hexane	6.753	57	189001	9.81 ug/L	98
21) Isopropyl ether(DIPE)	7.295	45	762051	10.18 ug/L	98
22) vinyl acetate	7.532	43	308119	5.82 ug/L	99
23) 1,1-dichloroethane	7.502	63	401617	10.55 ug/L	99
24) Ethyl-t-butyl ether(ETBE)	8.153	59	322836	4.90 ug/L	98
25) 2,2-dichloropropane	8.694	77	110070	3.53 ug/L	99
26) cis-1,2-dichloroethene	8.791	96	244147	10.58 ug/L	99
27) 2-butanone(MEK)	8.438	43	137677	11.04 ug/L	98
28) bromochloromethane	9.497	128	119528	10.72 ug/L	96
29) Tetrahydrofuran(THF)	9.613	42	66097	10.54 ug/L	97
30) chloroform	9.138	83	407625	11.09 ug/L	99
32) 1,1,1-trichloroethane	10.020	97	220389	7.34 ug/L #	89
33) carbon tetrachloride	10.574	117	159353	6.26 ug/L	98
34) 1,1-dichloropropene	10.373	75	299809	11.42 ug/L	100
36) tert-amyl methyl ether...	10.683	73	323908	5.57 ug/L #	41
37) benzene	10.981	78	864909	11.25 ug/L	98
38) 1,2-dichloroethane	10.975	62	346243	11.33 ug/L	99
39) trichloroethene	12.259	95	227771	10.90 ug/L	98
40) 1,2-dichloropropane	12.600	63	226554	10.21 ug/L	91
41) 1,4-dioxaneV	13.092	88	5305	21.71 ug/L	95
42) dibromomethane	13.092	93	154096	11.28 ug/L	95

Quantitation Report (QT Reviewed)

Sample : STD 10
Misc : X1; 5mL;
Data File : SA121307.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 11:30
Operator :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 13 14:39:48 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Tue Dec 13 11:26:51 2016
Response via : Initial Calibration

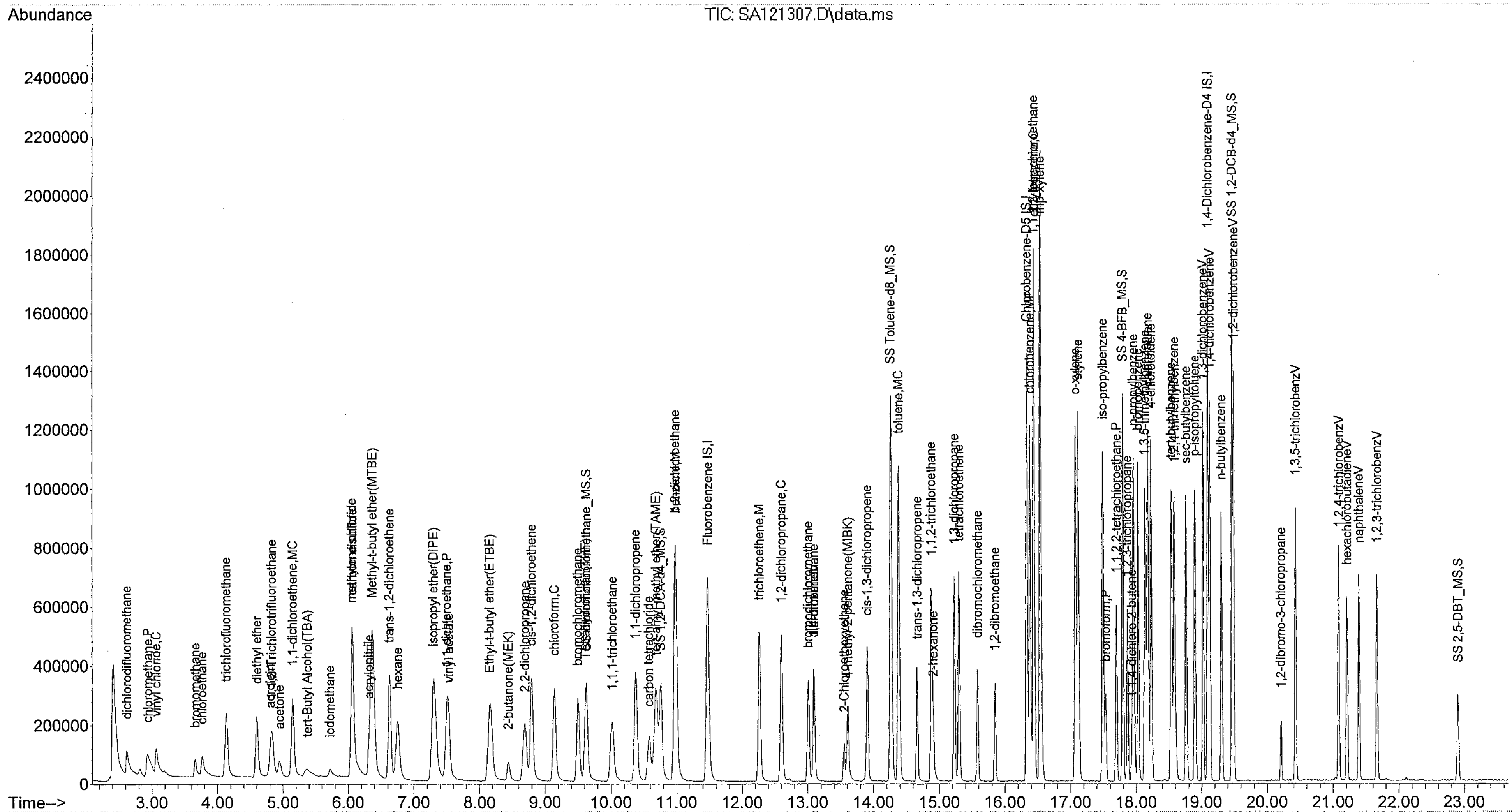
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	bromodichloromethane	13.007	83	259538	9.63	ug/L		98
44)	2-Chloroethoxyethene	13.555	63	57895	6.49	ug/L		98
45)	4-methyl-2-pentanone(M...	13.610	58	78245	9.21	ug/L		89
46)	cis-1,3-dichloropropene	13.902	75	246016	7.27	ug/L		96
49)	toluene	14.382	91	884517	11.77	ug/L		98
50)	trans-1,3-dichloropropene	14.662	75	178241	5.59	ug/L		97
51)	1,1,2-trichloroethane	14.875	83	175010	10.90	ug/L		97
52)	2-hexanone	14.905	43	167305	10.19	ug/L		97
53)	tetrachloroethene	15.301	166	227734	10.77	ug/L		97
54)	1,3-dichloropropane	15.228	76	338333	11.06	ug/L		99
55)	dibromochloromethane	15.581	129	188332	8.64	ug/L		100
56)	1,2-dibromoethane	15.848	107	199905	9.88	ug/L		99
57)	chlorobenzene	16.378	112	588640	11.14	ug/L		97
58)	1,1,1,2-tetrachloroethane	16.432	131	152248	7.65	ug/L		99
59)	ethylbenzene	16.438	91	938976	11.44	ug/L		99
60)	mp-xylene	16.536	106	718769	23.07	ug/L		97
61)	o-xylene	17.071	106	356403	10.59	ug/L		96
62)	styrene	17.114	104	629843	11.18	ug/L		97
63)	bromoform	17.533	173	118797	7.47	ug/L		97
64)	iso-propylbenzene	17.491	105	782356	11.63	ug/L		98
67)	bromobenzene	18.026	156	275713	10.95	ug/L		97
68)	1,1,2,2-tetrachloroethane	17.698	83	268891	11.22	ug/L		99
69)	1,2,3-trichloropropane	17.862	110	77719	11.02	ug/L		100
70)	t-1,4-dichloro-2-butene	17.929	53	33436	8.26	ug/L	#	63
71)	n-propylbenzene	17.953	91	914076	12.07	ug/L		98
72)	2-chlorotoluene	18.172	91	615966	11.59	ug/L		98
73)	4-chlorotoluene	18.221	91	649357	11.86	ug/L		99
74)	1,3,5-trimethylbenzene	18.130	105	630714	11.26	ug/L		99
75)	tert-butylbenzene	18.531	119	497342	11.22	ug/L		99
76)	1,2,4-trimethylbenzene	18.580	105	659966	11.30	ug/L		98
77)	sec-butylbenzene	18.756	105	681804	11.81	ug/L		98
78)	1,3-dichlorobenzeneV	19.018	146	431763	11.22	ug/L		98
79)	p-isopropyltoluene	18.896	119	585262	11.21	ug/L		98
80)	1,4-dichlorobenzeneV	19.121	146	442118	11.35	ug/L		96
81)	1,2-dichlorobenzeneV	19.486	146	425935	11.32	ug/L		96
82)	n-butylbenzene	19.298	91	500082	11.47	ug/L		97
84)	1,2-dibromo-3-chloropr...	20.204	75	32467	7.02	ug/L		94
85)	1,3,5-trichlorobenzV	20.429	180	266441	10.55	ug/L		100
86)	1,2,4-trichlorobenzV	21.086	180	240243	10.35	ug/L		99
87)	hexachlorobutadieneV	21.208	225	122322	10.63	ug/L		97
88)	naphthaleneV	21.390	128	523195	10.41	ug/L		99
89)	1,2,3-trichlorobenzV	21.664	180	225418	10.78	ug/L		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Sample : STD 10
Misc : X1; 5mL;
Data File : SA121307.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 11:30
Operator :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 13 14:39:48 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Tue Dec 13 11:26:51 2016
Response via : Initial Calibration



Sample : STD 20
Misc : X1; 5mL;
Data File : SA121308.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 12:07
Operator :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 13 14:40:43 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Tue Dec 13 11:26:51 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	11.474	96	990020	10.00	ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	768603	10.00	ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	385914	10.00	ug/L	0.00
System Monitoring Compounds						
31) SS dibromofluoromethan...	9.619	111	283979	10.56	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 105.60%			
35) SS 1,2-DCA-d4_MS	10.756	65	341906	11.13	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 111.30%			
48) SS Toluene-d8_MS	14.261	98	994520	10.25	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.50%			
65) SS 4-BFB_MS	17.789	95	388181	10.34	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 103.40%			
83) SS 1,2-DCB-d4_MS	19.462	152	379980	10.28	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.80%			
90) SS 2,5-DBT_MS	22.905	250	149490	18.07	ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery = 45.17%#			
Target Compounds						Qvalue
2) dichlorodifluoromethane	2.617	85	421106	20.74	ug/L	96
3) chloromethane	2.933	50	451517	20.71	ug/L	99
4) vinyl chloride	3.061	62	362013	25.97	ug/L	96
5) bromomethane	3.657	94	121085	21.61	ug/L #	76
6) chloroethane	3.766	64	249245	23.34	ug/L	94
7) trichlorofluoromethane	4.131	101	622431	22.83	ug/L	98
8) diethyl ether	4.600	59	393448	22.89	ug/L	99
9) 1,1,2-Trichlorotrifluo...	4.825	101	248184	21.21	ug/L	98
10) acrolein	4.819	56	59142	22.26	ug/L	96
11) acetone	4.947	43	234096	26.95	ug/L	98
12) 1,1-dichloroethene	5.147	96	316600	22.05	ug/L	95
13) tert-Butyl Alcohol(TBA)	5.354	59	155705	81.77	ug/L #	83
14) iodomethane	5.719	142	168461	22.99	ug/L #	79
15) methylene chloride	6.054	84	400032	22.91	ug/L	96
16) carbon disulfide	6.060	76	1225840	21.69	ug/L	100
17) acrylonitrile	6.322	53	175696	25.44	ug/L	95
18) Methyl-t-butyl ether(M...	6.358	73	1712881	34.00	ug/L #	95
19) trans-1,2-dichloroethene	6.626	96	432006	21.89	ug/L	100
20) hexane	6.753	57	389040	20.43	ug/L	100
21) Isopropyl ether(DIPE)	7.295	45	1514455	20.45	ug/L	99
22) vinyl acetate	7.532	43	740662	14.15	ug/L	98
23) 1,1-dichloroethane	7.502	63	784591	20.85	ug/L	100
24) Ethyl-t-butyl ether(ETBE)	8.159	59	672579	10.33	ug/L	98
25) 2,2-dichloropropane	8.688	77	244924	7.95	ug/L	96
26) cis-1,2-dichloroethene	8.791	96	467856	20.51	ug/L	99
27) 2-butanone(MEK)	8.433	43	290556	23.57	ug/L	97
28) bromochloromethane	9.497	128	232562	21.10	ug/L	97
29) Tetrahydrofuran(THF)	9.601	42	134943	21.76	ug/L	95
30) chloroform	9.144	83	792678	21.82	ug/L	99
32) 1,1,1-trichloroethane	10.014	97	466738	15.72	ug/L #	91
33) carbon tetrachloride	10.574	117	351362	13.97	ug/L	100
34) 1,1-dichloropropene	10.373	75	574032	22.11	ug/L	99
36) tert-amyl methyl ether...	10.683	73	733360	12.75	ug/L #	56
37) benzene	10.982	78	1667903	21.94	ug/L	98
38) 1,2-dichloroethane	10.975	62	675657	22.35	ug/L	100
39) trichloroethene	12.259	95	434933	21.06	ug/L	98
40) 1,2-dichloropropane	12.600	63	449232	20.49	ug/L	93
41) 1,4-dioxaneV	13.086	88	10218	40.45	ug/L #	94
42) dibromomethane	13.093	93	303855	22.51	ug/L	95

Quantitation Report (QT Reviewed)

Sample : STD 20
Misc : X1; 5mL;
Data File : SA121308.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 12:07
Operator :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 13 14:40:43 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Tue Dec 13 11:26:51 2016
Response via : Initial Calibration

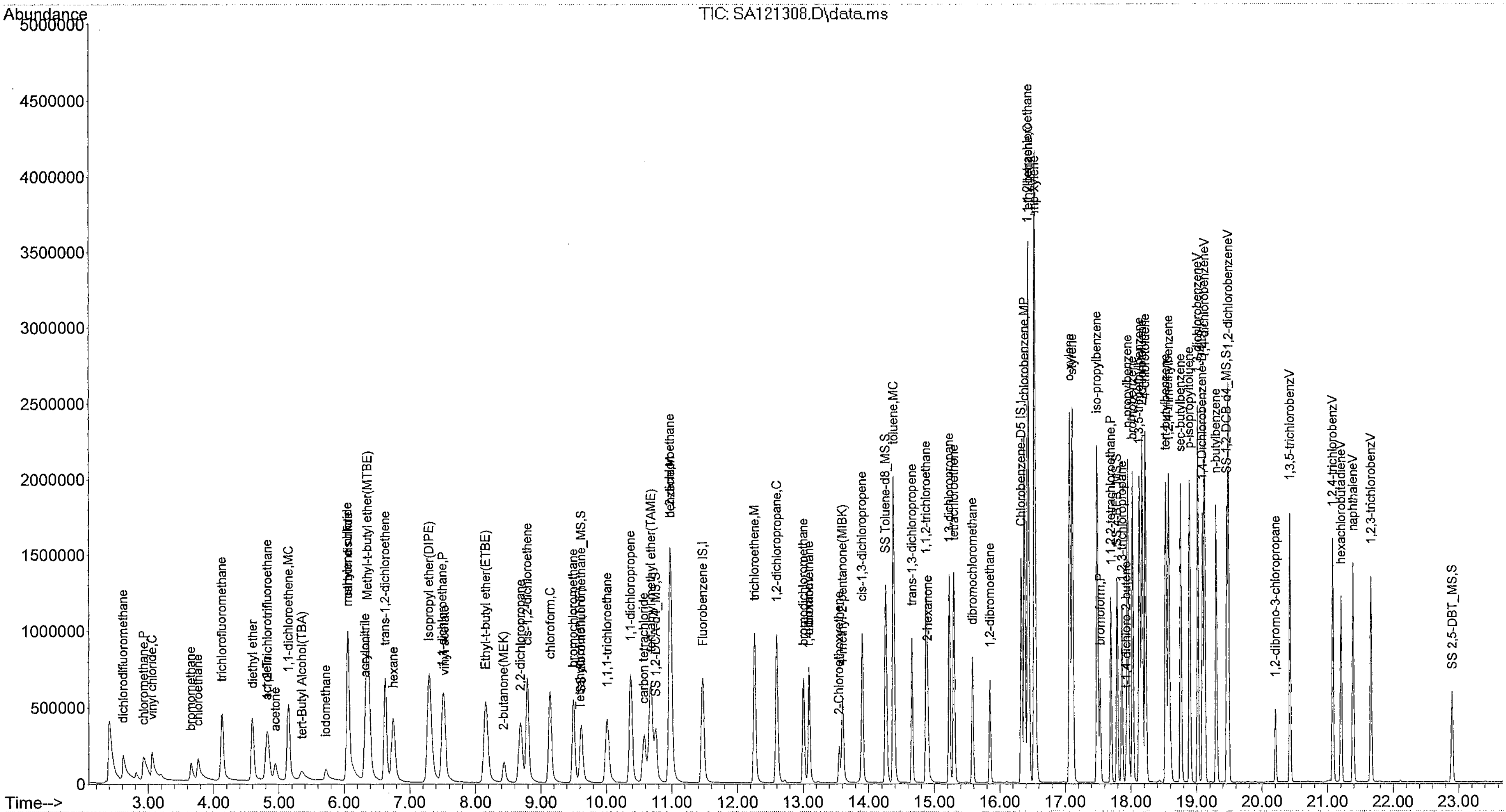
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) bromodichloromethane	13.007	83	522790	19.62 ug/L	98
44) 2-Chloroethoxyethene	13.549	63	106682	12.14 ug/L	98
45) 4-methyl-2-pentanone(M...	13.604	58	174297	20.74 ug/L	93
46) cis-1,3-dichloropropene	13.902	75	542838	16.23 ug/L	97
49) toluene	14.382	91	1672493	22.69 ug/L	99
50) trans-1,3-dichloropropene	14.662	75	450031	14.21 ug/L	97
51) 1,1,2-trichloroethane	14.875	83	343365	21.53 ug/L	99
52) 2-hexanone	14.899	43	376199	23.06 ug/L	98
53) tetrachloroethene	15.301	166	439034	20.90 ug/L	98
54) 1,3-dichloropropane	15.228	76	672176	22.12 ug/L	99
55) dibromochloromethane	15.581	129	410532	18.95 ug/L	99
56) 1,2-dibromoethane	15.848	107	417317	20.76 ug/L	100
57) chlorobenzene	16.378	112	1127188	21.72 ug/L	97
58) 1,1,1,2-tetrachloroethane	16.432	131	340226	17.20 ug/L	99
59) ethylbenzene	16.439	91	1773679	22.21 ug/L	99
60) mp-xylene	16.536	106	1369603	44.85 ug/L	98
61) o-xylene	17.071	106	690848	20.84 ug/L	98
62) styrene	17.114	104	1226620	22.19 ug/L	99
63) bromoform	17.534	173	274952	17.40 ug/L	99
64) iso-propylbenzene	17.485	105	1516516	23.04 ug/L	98
67) bromobenzene	18.026	156	524440	20.92 ug/L	98
68) 1,1,2,2-tetrachloroethane	17.698	83	538179	22.55 ug/L	100
69) 1,2,3-trichloropropane	17.868	110	152753	21.74 ug/L	99
70) t-1,4-dichloro-2-butene	17.929	53	69762	17.31 ug/L #	69
71) n-propylbenzene	17.953	91	1717771	23.13 ug/L	100
72) 2-chlorotoluene	18.172	91	1181396	22.61 ug/L	99
73) 4-chlorotoluene	18.221	91	1248072	23.20 ug/L	98
74) 1,3,5-trimethylbenzene	18.130	105	1214334	22.05 ug/L	98
75) tert-butylbenzene	18.531	119	958118	21.70 ug/L	99
76) 1,2,4-trimethylbenzene	18.574	105	1279662	22.30 ug/L	98
77) sec-butylbenzene	18.756	105	1312910	23.16 ug/L	99
78) 1,3-dichlorobenzeneV	19.018	146	840181	22.21 ug/L	99
79) p-isopropyltoluene	18.890	119	1129926	22.03 ug/L	99
80) 1,4-dichlorobenzeneV	19.121	146	851359	22.23 ug/L	99
81) 1,2-dichlorobenzeneV	19.486	146	827651	22.39 ug/L	99
82) n-butylbenzene	19.298	91	957157	22.33 ug/L	98
84) 1,2-dibromo-3-chloropr...	20.204	75	84268	18.29 ug/L	91
85) 1,3,5-trichlorobenzV	20.429	180	508970	20.24 ug/L	100
86) 1,2,4-trichlorobenzV	21.080	180	472782	20.46 ug/L	98
87) hexachlorobutadieneV	21.208	225	235933	20.59 ug/L	98
88) naphthaleneV	21.391	128	1065872	21.30 ug/L	100
89) 1,2,3-trichlorobenzV	21.664	180	432847	20.79 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Sample : STD 20
Misc : X1; 5mL;
Data File : SA121308.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 12:07
Operator :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 13 14:40:43 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Tue Dec 13 11:26:51 2016
Response via : Initial Calibration



Sample : STD 50
Misc : X1; 5mL;
Data File : SA121309.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 12:42
Operator :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 13 14:41:46 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Tue Dec 13 11:26:51 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.474	96	995953	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	768713	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	392064	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.625	111	284389	10.51 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 105.10%	
35) SS 1,2-DCA-d4_MS	10.756	65	344615	11.15 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 111.50%	
48) SS Toluene-d8_MS	14.260	98	1001410	10.32 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 103.20%	
65) SS 4-BFB_MS	17.789	95	386610	10.29 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 102.90%	
83) SS 1,2-DCB-d4_MS	19.462	152	379114	10.09 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 100.90%	
90) SS 2,5-DBT_MS	22.899	250	399675	47.55 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery	= 118.88%	

Target Compounds	R.T.	QIon	Response	Conc Units	Qvalue
2) dichlorodifluoromethane	2.616	85	1067732	52.26 ug/L	95
3) chloromethane	2.927	50	1093633	49.87 ug/L	99
4) vinyl chloride	3.061	62	752976	69.44 ug/L	97
5) bromomethane	3.657	94	407010	70.22 ug/L	94
6) chloroethane	3.766	64	615742	57.31 ug/L	99
7) trichlorofluoromethane	4.131	101	1527460	55.68 ug/L	100
8) diethyl ether	4.594	59	962617	55.67 ug/L	99
9) 1,1,2-Trichlorotrifluo...	4.819	101	624480	53.06 ug/L	97
10) acrolein	4.819	56	169330	63.35 ug/L	89
11) acetone	4.946	43	567529	62.89 ug/L	96
12) 1,1-dichloroethene	5.141	96	820447	56.81 ug/L	98
13) tert-Butyl Alcohol(TBA)	5.342	59	463857	242.13 ug/L #	78
14) iodomethane	5.719	142	582435	81.91 ug/L #	83
15) methylene chloride	6.054	84	988344	56.27 ug/L	98
16) carbon disulfide	6.060	76	3012509	52.98 ug/L	100
17) acrylonitrile	6.315	53	432332	62.22 ug/L	96
18) Methyl-t-butyl ether(M...	6.358	73	4346554	85.76 ug/L #	95
19) trans-1,2-dichloroethene	6.626	96	1066197	53.71 ug/L	100
20) hexane	6.747	57	963339	50.28 ug/L	98
21) Isopropyl ether(DIPE)	7.295	45	3832143	51.45 ug/L	99
22) vinyl acetate	7.532	43	2207955	41.92 ug/L	99
23) 1,1-dichloroethane	7.502	63	1988725	52.53 ug/L	100
24) Ethyl-t-butyl ether(ETBE)	8.159	59	1889188	28.83 ug/L	99
25) 2,2-dichloropropane	8.694	77	853159	27.52 ug/L	99
26) cis-1,2-dichloroethene	8.791	96	1187491	51.75 ug/L	99
27) 2-butanone(MEK)	8.432	43	753707	60.76 ug/L	97
28) bromochloromethane	9.503	128	575939	51.94 ug/L	96
29) Tetrahydrofuran(THF)	9.594	42	345800	55.43 ug/L	98
30) chloroform	9.144	83	1995936	54.61 ug/L	99
32) 1,1,1-trichloroethane	10.014	97	1344507	45.03 ug/L #	95
33) carbon tetrachloride	10.580	117	1074124	42.46 ug/L	99
34) 1,1-dichloropropene	10.373	75	1440804	55.17 ug/L	100
36) tert-amyl methyl ether...	10.677	73	2178113	37.65 ug/L #	73
37) benzene	10.981	78	4075453	53.30 ug/L	97
38) 1,2-dichloroethane	10.975	62	1659477	54.58 ug/L	99
39) trichloroethene	12.259	95	1091689	52.55 ug/L	97
40) 1,2-dichloropropane	12.600	63	1143286	51.83 ug/L	94
41) 1,4-dioxaneV	13.074	88	27690	105.65 ug/L	98
42) dibromomethane	13.092	93	742632	54.68 ug/L	96

Quantitation Report (QT Reviewed)

Sample : STD 50
Misc : X1; 5mL;
Data File : SA121309.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 12:42
Operator :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 13 14:41:46 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Tue Dec 13 11:26:51 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) bromodichloromethane	13.007	83	1370181	51.11 ug/L	99
44) 2-Chloroethoxyethene	13.549	63	247166	28.18 ug/L	99
45) 4-methyl-2-pentanone(M...	13.603	58	463401	54.81 ug/L	96
46) cis-1,3-dichloropropene	13.908	75	1580313	46.96 ug/L	97
49) toluene	14.382	91	3977292	56.21 ug/L	99
50) trans-1,3-dichloropropene	14.662	75	1415513	44.69 ug/L	98
51) 1,1,2-trichloroethane	14.875	83	846641	53.07 ug/L	99
52) 2-hexanone	14.899	43	978571	59.98 ug/L	99
53) tetrachloroethene	15.301	166	1090994	51.92 ug/L	97
54) 1,3-dichloropropane	15.228	76	1661007	54.65 ug/L	99
55) dibromochloromethane	15.581	129	1123731	51.85 ug/L	100
56) 1,2-dibromoethane	15.848	107	1076167	53.54 ug/L	100
57) chlorobenzene	16.378	112	2697855	53.95 ug/L	94
58) 1,1,1,2-tetrachloroethane	16.432	131	951300	48.08 ug/L	99
59) ethylbenzene	16.438	91	4077304	54.52 ug/L	97
60) mp-xylene	16.536	106	3244854	110.88 ug/L	95
61) o-xylene	17.071	106	1686191	52.31 ug/L	98
62) styrene	17.114	104	2927245	55.07 ug/L	97
63) bromoform	17.533	173	805356	50.97 ug/L	99
64) iso-propylbenzene	17.485	105	3575429	56.85 ug/L	99
67) bromobenzene	18.026	156	1277594	50.16 ug/L	98
68) 1,1,2,2-tetrachloroethane	17.698	83	1329541	54.84 ug/L	99
69) 1,2,3-trichloropropane	17.868	110	390565	54.72 ug/L	99
70) t-1,4-dichloro-2-butene	17.929	53	196208	47.93 ug/L #	82
71) n-propylbenzene	17.953	91	4039769	56.23 ug/L	98
72) 2-chlorotoluene	18.172	91	2796410	54.74 ug/L	99
73) 4-chlorotoluene	18.221	91	2945137	56.14 ug/L	99
74) 1,3,5-trimethylbenzene	18.130	105	2901281	53.95 ug/L	99
75) tert-butylbenzene	18.531	119	2344186	52.26 ug/L	100
76) 1,2,4-trimethylbenzene	18.574	105	3063904	54.83 ug/L	100
77) sec-butylbenzene	18.756	105	3114235	56.39 ug/L	99
78) 1,3-dichlorobenzeneV	19.018	146	2007086	54.30 ug/L	97
79) p-isopropyltoluene	18.890	119	2743655	54.87 ug/L	99
80) 1,4-dichlorobenzeneV	19.121	146	2020280	54.05 ug/L	98
81) 1,2-dichlorobenzeneV	19.486	146	1957075	54.23 ug/L	99
82) n-butylbenzene	19.298	91	2323407	55.63 ug/L	100
84) 1,2-dibromo-3-chloropr...	20.204	75	253793	54.22 ug/L	93
85) 1,3,5-trichlorobenzV	20.429	180	1266768	49.59 ug/L	99
86) 1,2,4-trichlorobenzV	21.080	180	1173152	49.97 ug/L	97
87) hexachlorobutadieneV	21.208	225	588065	50.53 ug/L	97
88) naphthaleneV	21.390	128	2707347	53.26 ug/L	98
89) 1,2,3-trichlorobenzV	21.664	180	1098675	51.93 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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Sample       : STD 50
Misc         : X1; 5mL;
Data File    : SA121309.D
Data Path    : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On       : 13 Dec 2016   12:42
Operator     :
ALS Vial     : 9    Sample Multiplier: 1

Quant Time: Dec 13 14:41:46 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Tue Dec 13 11:26:51 2016
Response via : Initial Calibration
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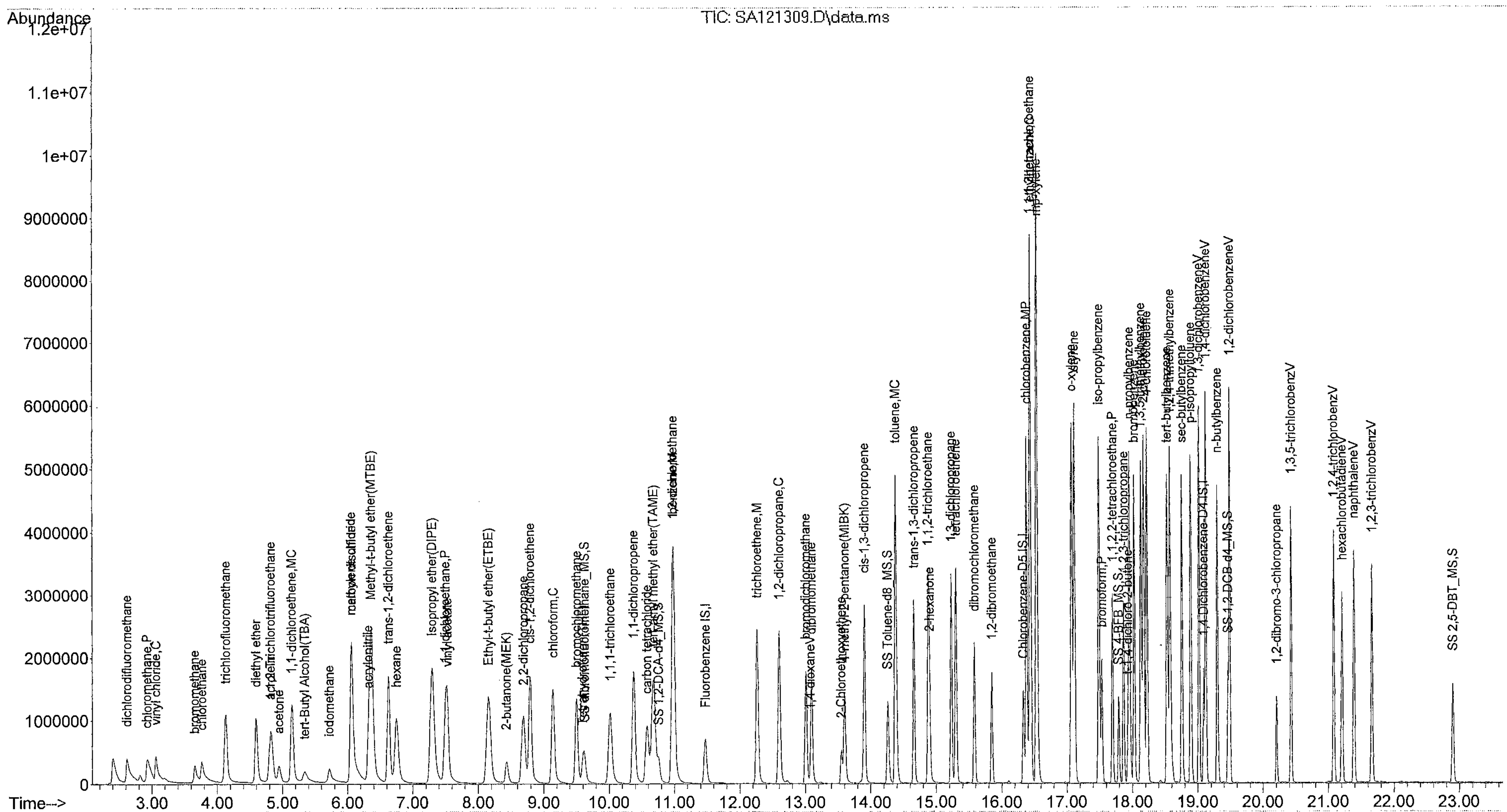

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Sample      : STD 100
Misc        : X1; 5mL;
Data File   : SA121310.D
Data Path   : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On      : 13 Dec 2016  13:18
Operator    :
ALS Vial    : 10   Sample Multiplier: 1

Quant Time: Dec 13 14:42:42 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Tue Dec 13 11:26:51 2016
Response via : Initial Calibration
```

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	11.474	96	1007075	10.00	ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	772928	10.00	ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	373865	10.00	ug/L	0.00
System Monitoring Compounds						
31) SS dibromofluoromethan...	9.625	111	286538	10.47	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	104.70%		
35) SS 1,2-DCA-d4_MS	10.756	65	339650	10.87	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	108.70%		
48) SS Toluene-d8_MS	14.261	98	981816	10.06	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	100.60%		
65) SS 4-BFB_MS	17.789	95	385359	10.21	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	102.10%		
83) SS 1,2-DCB-d4_MS	19.462	152	367490	10.26	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	102.60%		
90) SS 2,5-DBT_MS	22.899	250	772276	96.35	ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery =	240.88%#		
Target Compounds						Qvalue
2) dichlorodifluoromethane	2.617	85	2428227	117.54	ug/L	96
3) chloromethane	2.927	50	2081995	93.89	ug/L	100
4) vinyl chloride	3.055	62	1403537	Below Cal		97
5) bromomethane	3.651	94	821048	135.14	ug/L	95
6) chloroethane	3.760	64	1189112	109.45	ug/L	97
7) trichlorofluoromethane	4.125	101	3250520	117.19	ug/L	98
8) diethyl ether	4.600	59	1796831	102.76	ug/L	98
9) 1,1,2-Trichlorotrifluo...	4.819	101	1412062	118.65	ug/L	97
10) acrolein	4.825	56	328115	121.39	ug/L	87
11) acetone	4.953	43	1024162	107.97	ug/L	99
12) 1,1-dichloroethene	5.141	96	1661651	113.78	ug/L	97
13) tert-Butyl Alcohol(TBA)	5.360	59	1017210	525.12	ug/L #	82
14) iodomethane	5.719	142	1138313	167.11	ug/L #	82
15) methylene chloride	6.054	84	1875418	105.60	ug/L	98
16) carbon disulfide	6.060	76	5973070	103.88	ug/L	100
17) acrylonitrile	6.322	53	830211	118.17	ug/L	97
18) Methyl-t-butyl ether(M...	6.358	73	8517627	166.20	ug/L #	95
19) trans-1,2-dichloroethene	6.626	96	2079290	103.58	ug/L	100
20) hexane	6.747	57	2426030	125.22	ug/L	99
21) Isopropyl ether(DIPE)	7.295	45	7261642	96.42	ug/L	99
22) vinyl acetate	7.532	43	4557097	85.57	ug/L	99
23) 1,1-dichloroethane	7.502	63	3843811	100.41	ug/L	99
24) Ethyl-t-butyl ether(ETBE)	8.159	59	4315830	65.14	ug/L	100
25) 2,2-dichloropropane	8.688	77	2188271	69.81	ug/L	99
26) cis-1,2-dichloroethene	8.791	96	2273687	98.00	ug/L	98
27) 2-butanone(MEK)	8.433	43	1433195	114.27	ug/L	99
28) bromochloromethane	9.497	128	1109420	98.95	ug/L	98
29) Tetrahydrofuran(THF)	9.595	42	692643	109.81	ug/L	98
30) chloroform	9.138	83	3772391	102.07	ug/L	98
32) 1,1,1-trichloroethane	10.014	97	2943589	97.49	ug/L	96
33) carbon tetrachloride	10.580	117	2474358	96.73	ug/L	100
34) 1,1-dichloropropene	10.373	75	2919148	110.54	ug/L	100
36) tert-amyl methyl ether...	10.677	73	4707165	80.46	ug/L #	83
37) benzene	10.988	78	7536440	97.47	ug/L	97
38) 1,2-dichloroethane	10.975	62	3077862	100.11	ug/L	99
39) trichloroethene	12.259	95	2123997	101.11	ug/L	98
40) 1,2-dichloropropane	12.600	63	2173897	97.45	ug/L	95
41) 1,4-dioxaneV	13.080	88	56541	211.36	ug/L	98
42) dibromomethane	13.093	93	1407168	102.47	ug/L	96

Quantitation Report (QT Reviewed)

Sample : STD 100
Misc : X1; 5mL;
Data File : SA121310.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 13:18
Operator :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 13 14:42:42 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Tue Dec 13 11:26:51 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43)	bromodichloromethane	13.007	83	2647190	97.66	ug/L	100
44)	2-Chloroethoxyethene	13.549	63	467556	53.40	ug/L	99
45)	4-methyl-2-pentanone(M...	13.597	58	911008	106.57	ug/L	97
46)	cis-1,3-dichloropropene	13.908	75	3127290	91.91	ug/L	97
49)	toluene	14.382	91	6940350	103.69	ug/L	94
50)	trans-1,3-dichloropropene	14.662	75	2885199	90.59	ug/L	99
51)	1,1,2-trichloroethane	14.875	83	1566470	97.65	ug/L	100
52)	2-hexanone	14.899	43	1845651	112.51	ug/L	99
53)	tetrachloroethene	15.301	166	2138955	101.24	ug/L	96
54)	1,3-dichloropropane	15.228	76	3071760	100.52	ug/L	98
55)	dibromochloromethane	15.581	129	2220545	101.91	ug/L	100
56)	1,2-dibromoethane	15.848	107	2027453	100.31	ug/L	98
57)	chlorobenzene	16.378	112	4835601	101.88	ug/L	93
58)	1,1,1,2-tetrachloroethane	16.432	131	1855715	93.29	ug/L	99
59)	ethylbenzene	16.439	91	6943383	102.80	ug/L	93
60)	mp-xylene	16.536	106	5716048	207.55	ug/L	85
61)	o-xylene	17.071	106	3153382	101.85	ug/L	90
62)	styrene	17.114	104	5159548	102.48	ug/L	95
63)	bromoform	17.534	173	1615962	101.71	ug/L	98
64)	iso-propylbenzene	17.491	105	6291337	106.87	ug/L	94
67)	bromobenzene	18.026	156	2334796	96.14	ug/L	98
68)	1,1,2,2-tetrachloroethane	17.698	83	2462064	106.50	ug/L	97
69)	1,2,3-trichloropropane	17.868	110	755566	111.02	ug/L	99
70)	t-1,4-dichloro-2-butene	17.935	53	418783	107.29	ug/L	87
71)	n-propylbenzene	17.953	91	7003281	111.51	ug/L	93
72)	2-chlorotoluene	18.172	91	4937523	108.44	ug/L	96
73)	4-chlorotoluene	18.221	91	5133511	110.17	ug/L	96
74)	1,3,5-trimethylbenzene	18.130	105	5178426	108.55	ug/L	95
75)	tert-butylbenzene	18.531	119	4262698	99.66	ug/L	97
76)	1,2,4-trimethylbenzene	18.574	105	5280446	106.41	ug/L	96
77)	sec-butylbenzene	18.756	105	5486316	112.32	ug/L	95
78)	1,3-dichlorobenzeneV	19.018	146	3506291	106.36	ug/L	94
79)	p-isopropyltoluene	18.890	119	4863531	109.73	ug/L	96
80)	1,4-dichlorobenzeneV	19.121	146	3533758	106.22	ug/L	98
81)	1,2-dichlorobenzeneV	19.486	146	3407695	106.09	ug/L	97
82)	n-butylbenzene	19.298	91	4114306	111.17	ug/L	96
84)	1,2-dibromo-3-chloropr...	20.204	75	526183	117.90	ug/L	93
85)	1,3,5-trichlorobenzV	20.429	180	2258672	92.72	ug/L	98
86)	1,2,4-trichlorobenzV	21.080	180	2136389	95.43	ug/L	96
87)	hexachlorobutadieneV	21.208	225	1076050	96.96	ug/L	97
88)	naphthaleneV	21.391	128	5002216	103.20	ug/L	97
89)	1,2,3-trichlorobenzV	21.664	180	1982260	98.26	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)


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Sample      : STD 100
Misc        : X1; 5mL;
Data File   : SA121310.D
Data Path   : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On      : 13 Dec 2016  13:18
Operator    :
ALS Vial    : 10   Sample Multiplier: 1

Quant Time: Dec 13 14:42:42 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Tue Dec 13 11:26:51 2016
Response via : Initial Calibration
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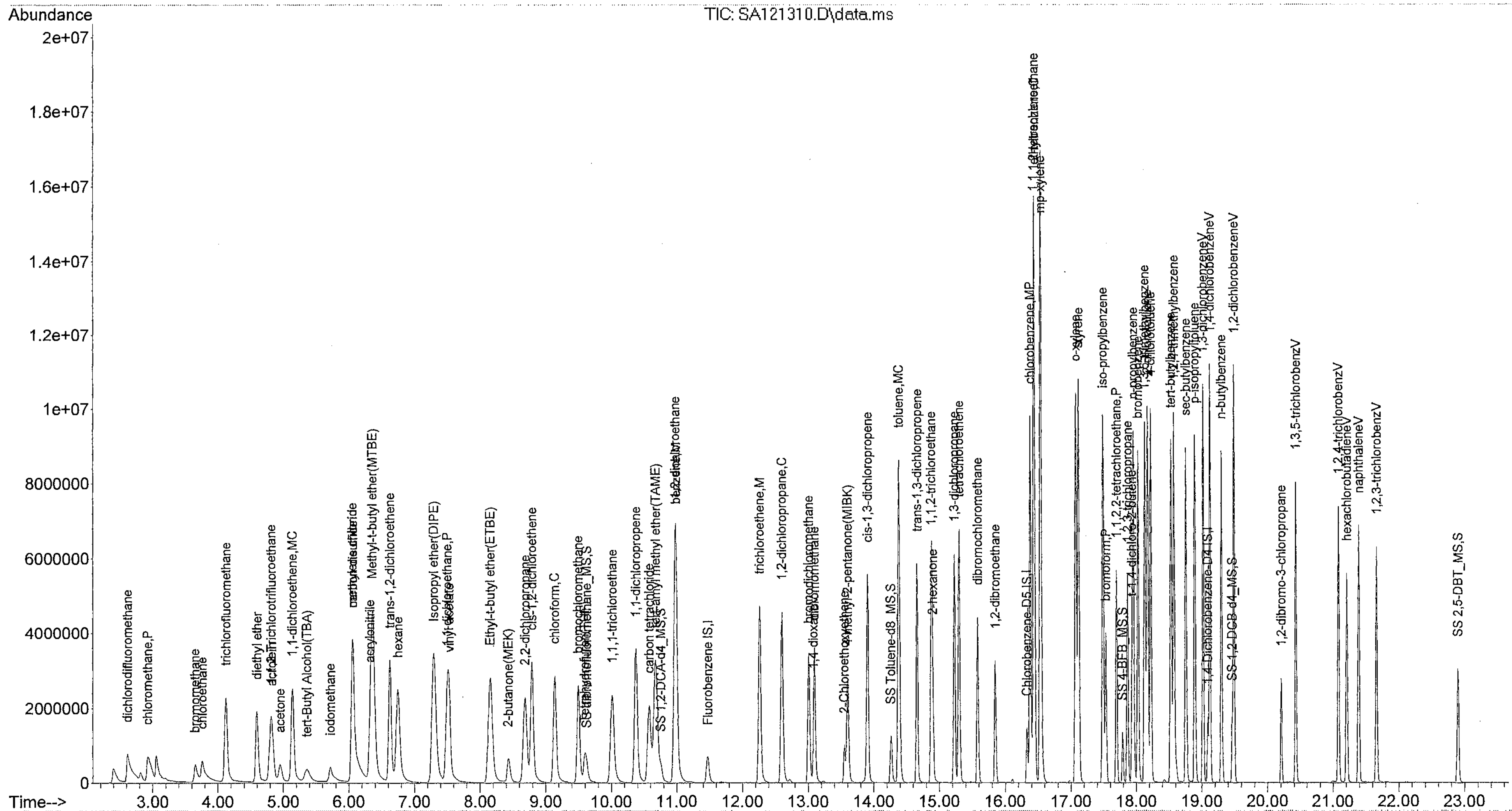

Quantitation Report (QT Reviewed)

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Sample     : STD 200
Misc       : X1; 5mL;
Data File  : SA121312.D
Data Path  : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On     : 13 Dec 2016  14:36
Operator   :
ALS Vial   : 12   Sample Multiplier: 1

Quant Time: Dec 13 15:02:39 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Tue Dec 13 14:45:31 2016
Response via : Initial Calibration
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Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	11.468	96	970773	10.00	ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	736538	10.00	ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	361393	10.00	ug/L	0.00
System Monitoring Compounds						
31) SS dibromofluoromethan...	9.625	111	276051	10.00	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.00%			
35) SS 1,2-DCA-d4_MS	10.756	65	322750	9.67	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 96.70%			
48) SS Toluene-d8_MS	14.261	98	958802	10.06	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.60%			
65) SS 4-BFB_MS	17.795	95	370403	9.96	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.60%			
83) SS 1,2-DCB-d4_MS	19.462	152	348905	9.90	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.00%			
90) SS 2,5-DBT_MS	22.905	250	1481195	208.37	ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery = 520.92%#			

Compound	R.T.	QIon	Response	Conc	Units	Qvalue
Target Compounds						
2) dichlorodifluoromethane	2.617	85	4830897	206.97	ug/L	99
3) chloromethane	2.927	50	4429236	177.09	ug/L	99
4) vinyl chloride	3.055	62	2516399	127.81	ug/L	100
5) bromomethane	3.645	94	1686923	261.61	ug/L	81
6) chloroethane	3.754	64	2240465	196.40	ug/L	97
7) trichlorofluoromethane	4.113	101	6130027	193.19	ug/L	96
8) diethyl ether	4.606	59	3380805	182.56	ug/L	99
9) 1,1,2-Trichlorotrifluo...	4.807	101	2702149	203.64	ug/L	97
10) acrolein	4.831	56	551616	182.55	ug/L	96
11) acetone	4.971	43	2111554	192.37	ug/L	99
12) 1,1-dichloroethene	5.135	96	3092124	198.52	ug/L	96
13) tert-Butyl Alcohol(TBA)	5.452	59	1899508m	1154.23	ug/L	
14) iodomethane	5.713	142	2013215	303.99	ug/L	98
15) methylene chloride	6.054	84	3485596	148.83	ug/L	97
16) carbon disulfide	6.054	76	10816920	174.96	ug/L	100
17) acrylonitrile	6.334	53	1546022	172.34	ug/L	95
18) Methyl-t-butyl ether(M...	6.364	73	15447544	370.08	ug/L	95
19) trans-1,2-dichloroethene	6.620	96	3753545	181.15	ug/L	98
20) hexane	6.741	57	4684103	216.17	ug/L	100
21) Isopropyl ether(DIPE)	7.301	45	13018717	181.06	ug/L	98
22) vinyl acetate	7.532	43	8428561	277.09	ug/L	96
23) 1,1-dichloroethane	7.496	63	6910509	183.90	ug/L	97
24) Ethyl-t-butyl ether(ETBE)	8.159	59	8611859	255.93	ug/L	97
25) 2,2-dichloropropane	8.688	77	4589661	372.26	ug/L	96
26) cis-1,2-dichloroethene	8.791	96	4111064	181.42	ug/L	97
27) 2-butanone(MEK)	8.445	43	2763179	205.24	ug/L	98
28) bromochloromethane	9.497	128	1998241	180.39	ug/L	98
29) Tetrahydrofuran(THF)	9.601	42	1266603	190.95	ug/L	95
30) chloroform	9.138	83	6798834	176.79	ug/L	97
32) 1,1,1-trichloroethane	10.014	97	5611904	258.12	ug/L	92
33) carbon tetrachloride	10.574	117	4839533	308.95	ug/L	99
34) 1,1-dichloropropene	10.373	75	5306190	189.13	ug/L	98
36) tert-amyl methyl ether...	10.677	73	8991378	268.54	ug/L #	71
37) benzene	10.988	78	12920304	157.68	ug/L	96
38) 1,2-dichloroethane	10.975	62	5488898	165.05	ug/L	98
39) trichloroethene	12.259	95	3798562	175.82	ug/L	99
40) 1,2-dichloropropane	12.600	63	3925054	185.16	ug/L	97
41) 1,4-dioxaneV	13.093	88	105686	414.38	ug/L	96
42) dibromomethane	13.093	93	2537249	178.35	ug/L	98

Sample : STD 200
Misc : X1; 5mL;
Data File : SA121312.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 14:36
Operator :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 13 15:02:39 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Tue Dec 13 14:45:31 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
43)	bromodichloromethane	13.007	83	4802412	196.35 ug/L		98
44)	2-Chloroethoxyethene	13.555	63	873434	158.59 ug/L		99
45)	4-methyl-2-pentanone(M...	13.604	58	1677215	224.75 ug/L		92
46)	cis-1,3-dichloropropene	13.908	75	5598066	241.36 ug/L		93
49)	toluene	14.382	91	11237423	141.13 ug/L		88
50)	trans-1,3-dichloropropene	14.662	75	5281773	306.06 ug/L		96
51)	1,1,2-trichloroethane	14.881	83	2763028	173.28 ug/L		98
52)	2-hexanone	14.905	43	3369381	233.46 ug/L		98
53)	tetrachloroethene	15.301	166	3744324	174.29 ug/L		97
54)	1,3-dichloropropane	15.228	76	5280684	170.45 ug/L		95
55)	dibromochloromethane	15.581	129	4060920	236.05 ug/L		100
56)	1,2-dibromoethane	15.848	107	3518617	204.14 ug/L		96
57)	chlorobenzene	16.384	112	7909807	145.85 ug/L		91
58)	1,1,1,2-tetrachloroethane	16.432	131	3312477	238.64 ug/L		98
59)	ethylbenzene	16.445	91	10566972	125.42 ug/L	#	85
60)	mp-xylene	16.542	106	9229074	286.96 ug/L	#	72
61)	o-xylene	17.071	106	5422881	164.13 ug/L		78
62)	styrene	17.114	104	8411941	149.64 ug/L		92
63)	bromoform	17.534	173	2956036	257.85 ug/L		99
64)	iso-propylbenzene	17.491	105	9931518	141.02 ug/L	#	85
67)	bromobenzene	18.032	156	4026393	161.07 ug/L		97
68)	1,1,2,2-tetrachloroethane	17.698	83	4109982	171.80 ug/L		95
69)	1,2,3-trichloropropane	17.868	110	1327295	184.31 ug/L		99
70)	t-1,4-dichloro-2-butene	17.935	53	769155	244.27 ug/L	#	75
71)	n-propylbenzene	17.953	91	10741596	135.74 ug/L	#	84
72)	2-chlorotoluene	18.172	91	8068513	144.65 ug/L		89
73)	4-chlorotoluene	18.227	91	8121615m	137.49 ug/L		
74)	1,3,5-trimethylbenzene	18.130	105	8408274	151.12 ug/L		88
75)	tert-butylbenzene	18.531	119	7195508	161.86 ug/L		92
76)	1,2,4-trimethylbenzene	18.580	105	8569345	145.63 ug/L		87
77)	sec-butylbenzene	18.756	105	8820318	146.25 ug/L	#	87
78)	1,3-dichlorobenzeneV	19.024	146	5703620	144.20 ug/L		89
79)	p-isopropyltoluene	18.896	119	7918276	153.00 ug/L	#	88
80)	1,4-dichlorobenzeneV	19.127	146	5748136	141.51 ug/L		94
81)	1,2-dichlorobenzeneV	19.492	146	5510170	143.32 ug/L		94
82)	n-butylbenzene	19.298	91	6666306	149.62 ug/L	#	86
84)	1,2-dibromo-3-chloropr...	20.210	75	924632	296.28 ug/L		98
85)	1,3,5-trichlorobenzV	20.429	180	3920693	161.54 ug/L		97
86)	1,2,4-trichlorobenzV	21.086	180	3729017	167.87 ug/L		96
87)	hexachlorobutadieneV	21.208	225	1934417	163.86 ug/L		98
88)	naphthaleneV	21.391	128	8173653	170.18 ug/L	#	94
89)	1,2,3-trichlorobenzV	21.664	180	3496391	173.91 ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)


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Sample       : STD 200
Misc         : X1; 5mL;
Data File    : SA121312.D
Data Path    : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On       : 13 Dec 2016  14:36
Operator     :
ALS Vial     : 12   Sample Multiplier: 1

Quant Time: Dec 13 15:02:39 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Tue Dec 13 14:45:31 2016
Response via : Initial Calibration
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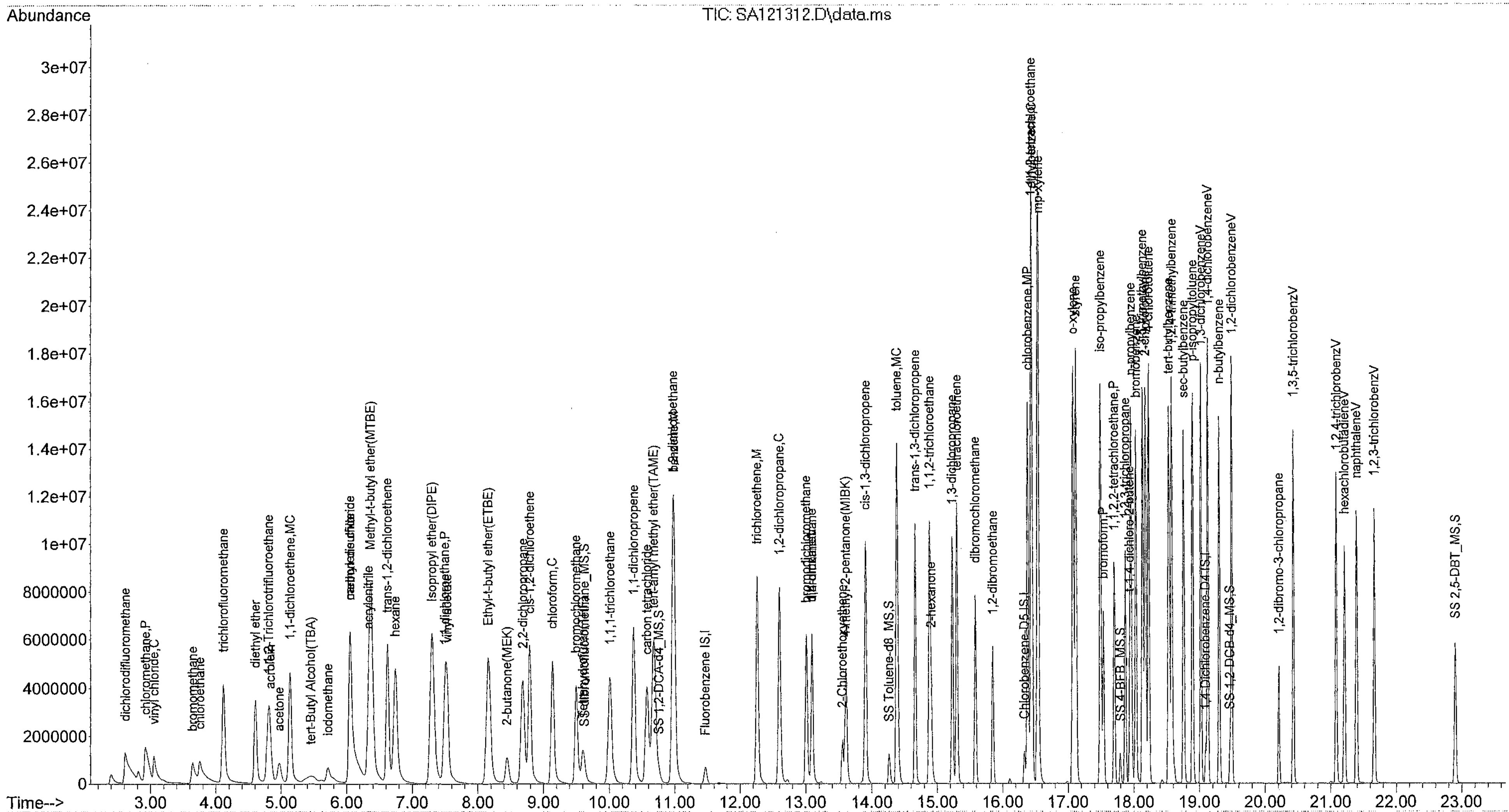


4VID1213.M Thu Dec 22 13:40:43 2016

Sample : STD 300
Misc : X1; 5mL;
Data File : SA121314.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 15:47
Operator :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 13 16:19:13 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Tue Dec 13 15:03:03 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.474	96	905626	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.335	117	690620	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.097	152	343529	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.625	111	257544	10.00 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.00%		
35) SS 1,2-DCA-d4_MS	10.762	65	302006	9.73 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 97.30%		
48) SS Toluene-d8_MS	14.266	98	901238	10.08 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.80%		
65) SS 4-BFB_MS	17.795	95	349762	10.04 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.40%		
83) SS 1,2-DCB-d4_MS	19.462	152	332192	9.93 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.30%		
90) SS 2,5-DBT_MS	22.905	250	2218461	326.94 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery = 817.35%#		

Target Compounds	R.T.	QIon	Response	Conc Units	Qvalue
2) dichlorodifluoromethane	2.616	85	5941478	271.91 ug/L	99
3) chloromethane	2.921	50	6940802	300.92 ug/L	98
4) vinyl chloride	3.054	62	3431045	193.79 ug/L	99
5) bromomethane	3.632	94	2493836	400.85 ug/L	84
6) chloroethane	3.748	64	3151050	296.69 ug/L	97
7) trichlorofluoromethane	4.107	101	7952164	269.56 ug/L	96
8) diethyl ether	4.618	59	4902921	286.29 ug/L	98
9) 1,1,2-Trichlorotrifluo...	4.807	101	3328682	268.42 ug/L	96
10) acrolein	4.849	56	743699	266.73 ug/L	99
11) acetone	4.995	43	2854253	279.92 ug/L	98
12) 1,1-dichloroethene	5.135	96	4263885	293.65 ug/L	95
13) tert-Butyl Alcohol(TBA)	5.676	59	2756667m	1765.33 ug/L	
14) iodomethane	5.713	142	2607086	396.23 ug/L	97
15) methylene chloride	6.054	84	5002205	234.97 ug/L	96
16) carbon disulfide	6.054	76	14707390	258.24 ug/L	99
17) acrylonitrile	6.352	53	2157329	261.81 ug/L	96
18) Methyl-t-butyl ether(M...	6.376	73	21922823	567.23 ug/L #	93
19) trans-1,2-dichloroethene	6.626	96	5319819	277.83 ug/L	97
20) hexane	6.741	57	5252285	257.74 ug/L	100
21) Isopropyl ether(DIPE)	7.313	45	18239395	274.51 ug/L	97
22) vinyl acetate	7.544	43	12095413	410.42 ug/L #	95
23) 1,1-dichloroethane	7.502	63	9762581	280.75 ug/L	95
24) Ethyl-t-butyl ether(ETBE)	8.171	59	13544573	419.74 ug/L	95
25) 2,2-dichloropropane	8.688	77	7089742	567.52 ug/L	96
26) cis-1,2-dichloroethene	8.797	96	5832336	278.48 ug/L	96
27) 2-butanone(MEK)	8.463	43	3799443	301.63 ug/L	97
28) bromochloromethane	9.503	128	2821550	275.74 ug/L	98
29) Tetrahydrofuran(THF)	9.613	42	1791588	290.98 ug/L	95
30) chloroform	9.144	83	9527042	268.68 ug/L	95
32) 1,1,1-trichloroethane	10.014	97	7920095	379.47 ug/L	92
33) carbon tetrachloride	10.574	117	6733082	436.95 ug/L	99
34) 1,1-dichloropropene	10.373	75	7212921	277.10 ug/L	97
36) tert-amyl methyl ether...	10.689	73	13212321	408.97 ug/L #	68
37) benzene	10.994	78	17278705	230.92 ug/L	94
38) 1,2-dichloroethane	10.981	62	7653464	251.08 ug/L	97
39) trichloroethene	12.265	95	5230730	262.71 ug/L	98
40) 1,2-dichloropropane	12.600	63	5452415	277.77 ug/L	97
41) 1,4-dioxaneV	13.117	88	143607	599.97 ug/L #	95
42) dibromomethane	13.098	93	3538766	269.56 ug/L	97

Quantitation Report (QT Reviewed)

Sample : STD 300
Misc : X1; 5mL;
Data File : SA121314.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 15:47
Operator :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 13 16:19:13 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Tue Dec 13 15:03:03 2016
Response via : Initial Calibration

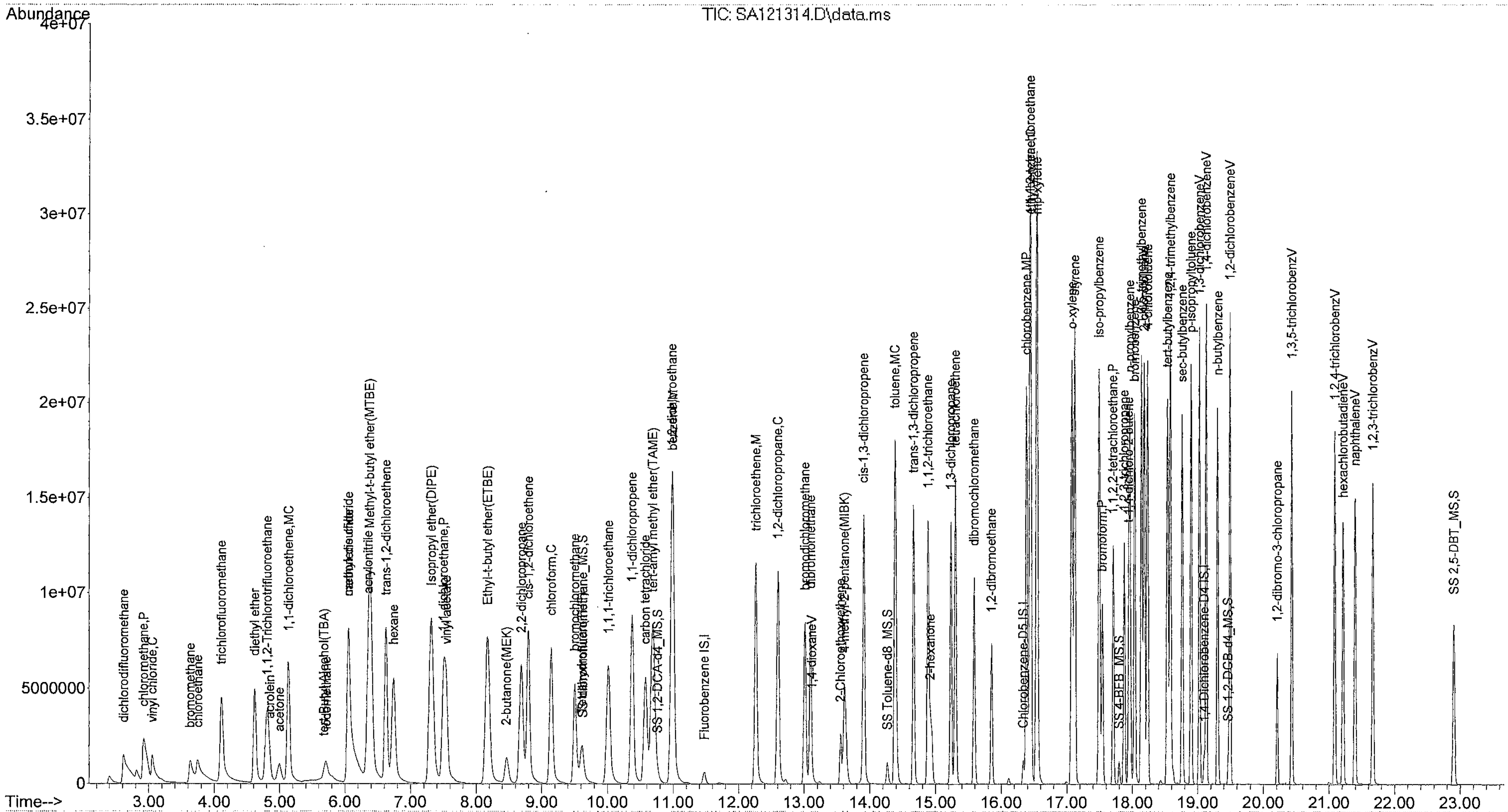
	Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
43)	bromodichloromethane	13.013	83	6763906	296.98 ug/L		96
44)	2-Chloroethoxyethene	13.555	63	1273686	253.15 ug/L		98
45)	4-methyl-2-pentanone(M...	13.616	58	2348102	332.71 ug/L		91
46)	cis-1,3-dichloropropene	13.908	75	7669306	347.27 ug/L	#	90
49)	toluene	14.382	91	14393106	198.63 ug/L	#	84
50)	trans-1,3-dichloropropene	14.662	75	7274454	426.92 ug/L		94
51)	1,1,2-trichloroethane	14.881	83	3805778	257.99 ug/L		98
52)	2-hexanone	14.917	43	4622543	335.97 ug/L		97
53)	tetrachloroethene	15.301	166	5011418	252.02 ug/L		95
54)	1,3-dichloropropane	15.234	76	7025361	245.47 ug/L		92
55)	dibromochloromethane	15.587	129	5628365	342.73 ug/L		99
56)	1,2-dibromoethane	15.848	107	4815565	297.34 ug/L		95
57)	chlorobenzene	16.384	112	10358014	209.37 ug/L	#	87
58)	1,1,1,2-tetrachloroethane	16.438	131	4573340	344.72 ug/L		98
59)	ethylbenzene	16.444	91	13121968	172.53 ug/L	#	78
60)	mp-xylene	16.542	106	11853475m	404.50 ug/L		
61)	o-xylene	17.077	106	7327515	240.84 ug/L	#	72
62)	styrene	17.120	104	10949566	213.10 ug/L		88
63)	bromoform	17.539	173	4146888	374.93 ug/L		98
64)	iso-propylbenzene	17.491	105	12426088	193.90 ug/L	#	79
67)	bromobenzene	18.032	156	5524387	237.11 ug/L		96
68)	1,1,2,2-tetrachloroethane	17.704	83	5432824	242.32 ug/L		94
69)	1,2,3-trichloropropane	17.874	110	1808478	266.28 ug/L		99
70)	t-1,4-dichloro-2-butene	17.941	53	1072054	349.57 ug/L	#	73
71)	n-propylbenzene	17.959	91	13180424	181.04 ug/L	#	76
72)	2-chlorotoluene	18.178	91	10307722	199.94 ug/L	#	84
73)	4-chlorotoluene	18.233	91	10539215	193.75 ug/L	#	83
74)	1,3,5-trimethylbenzene	18.136	105	10711582	207.60 ug/L	#	82
75)	tert-butylbenzene	18.537	119	9293297	224.20 ug/L	#	88
76)	1,2,4-trimethylbenzene	18.580	105	10903391	200.37 ug/L	#	82
77)	sec-butylbenzene	18.762	105	10986358	196.93 ug/L	#	81
78)	1,3-dichlorobenzeneV	19.024	146	7473241	204.47 ug/L	#	85
79)	p-isopropyltoluene	18.896	119	9992445	208.01 ug/L	#	82
80)	1,4-dichlorobenzeneV	19.127	146	7446538	198.66 ug/L	#	89
81)	1,2-dichlorobenzeneV	19.492	146	7174096	202.02 ug/L	#	89
82)	n-butylbenzene	19.304	91	8514641	206.24 ug/L	#	80
84)	1,2-dibromo-3-chloropr...	20.210	75	1292525	413.58 ug/L		98
85)	1,3,5-trichlorobenzV	20.429	180	5383080	237.91 ug/L		96
86)	1,2,4-trichlorobenzV	21.086	180	5183220	249.47 ug/L		93
87)	hexachlorobutadieneV	21.214	225	2755841	250.10 ug/L		97
88)	naphthaleneV	21.396	128	10507718	233.64 ug/L	#	90
89)	1,2,3-trichlorobenzV	21.664	180	4908369	260.23 ug/L		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Sample : STD 300
Misc : X1; 5mL;
Data File : SA121314.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 15:47
Operator :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 13 16:19:13 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Tue Dec 13 15:03:03 2016
Response via : Initial Calibration



4VID1213.M Thu Dec 22 13:40:51 2016

Quantitation Report (QT Reviewed)

Sample : LCS
Misc : X1; 5mL;
Data File : SA121317.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 17:34
Operator :
ALS Vial : 17 Sample Multiplier: 1

20ppb except where noted

Quant Time: Dec 14 10:59:55 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.468	96	914245	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	708355	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	351692	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.625	111	261566	10.06 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	100.60%	
35) SS 1,2-DCA-d4_MS	10.756	65	307668	9.84 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	98.40%	
48) SS Toluene-d8_MS	14.261	98	911261	9.93 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	99.30%	
65) SS 4-BFB_MS	17.789	95	356500	9.97 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	99.70%	
83) SS 1,2-DCB-d4_MS	19.462	152	349171	10.20 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	102.00%	
90) SS 2,5-DBT_MS	22.905	250	3633	0.52 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery =	1.30%#	
Target Compounds					Qvalue
2) dichlorodifluoromethane	2.623	85	276194	12.63 ug/L	99
3) chloromethane	2.927	50	401759	17.99 ug/L	100
4) vinyl chloride	3.061	62	280179	18.20 ug/L	98
5) bromomethane	3.657	94	119859	16.96 ug/L	87
6) chloroethane	3.766	64	188983	17.65 ug/L	95
7) trichlorofluoromethane	4.131	101	515457	17.47 ug/L	99
8) diethyl ether	4.594	59	278459	16.17 ug/L	98
9) 1,1,2-Trichlorotrifluo...	4.825	101	264999	21.37 ug/L	99
10) acrolein	4.831	56	44312	15.94 ug/L	95
11) acetone	4.947	43	120959	11.70 ug/L	100
12) 1,1-dichloroethene	5.147	96	273249	18.68 ug/L	99
13) tert-Butyl Alcohol(TBA) 100 ppb	5.342	59	168029	91.72 ug/L #	71
14) iodomethane	5.725	142	157277m	14.65 ug/L	
15) methylene chloride	6.060	84	337474	20.14 ug/L	100
16) carbon disulfide	6.060	76	992079	17.48 ug/L	100
17) acrylonitrile	6.315	53	152835	19.81 ug/L	91
18) Methyl-t-butyl ether(M...	6.364	73	899301	23.16 ug/L	97
19) trans-1,2-dichloroethene	6.632	96	377727	19.67 ug/L	97
20) hexane	6.766	57	8037	0.39 ug/L #	92
21) Isopropyl ether(DIPE)	7.301	45	1432451	21.52 ug/L	99
22) vinyl acetate	7.532	43	678875	16.79 ug/L	100
23) 1,1-dichloroethane	7.502	63	719771	20.62 ug/L	100
24) Ethyl-t-butyl ether(ETBE)	8.159	59	782180	22.95 ug/L	99
25) 2,2-dichloropropane	8.688	77	310557	18.24 ug/L	98
26) cis-1,2-dichloroethene	8.797	96	418863	19.94 ug/L	95
27) 2-butanone(MEK)	8.439	43	208233	16.37 ug/L	99
28) bromochloromethane	9.503	128	211177	20.59 ug/L	100
29) Tetrahydrofuran(THF)	9.600	42	150281	24.25 ug/L	98
30) chloroform	9.138	83	733023	20.67 ug/L	100
32) 1,1,1-trichloroethane	10.014	97	494955	18.65 ug/L	95
33) carbon tetrachloride	10.580	117	372063	17.08 ug/L	99
34) 1,1-dichloropropene	10.373	75	529488	20.29 ug/L	100
36) tert-amyl methyl ether...	10.683	73	811676	18.61 ug/L #	79
37) benzene	10.988	78	1511636	20.44 ug/L	100
38) 1,2-dichloroethane	10.975	62	597954	19.72 ug/L	100
39) trichloroethene	12.259	95	405846	20.42 ug/L	99
40) 1,2-dichloropropane	12.600	63	411077	20.89 ug/L	98
41) 1,4-dioxaneV	13.086	88	5693	23.56 ug/L #	75
42) dibromomethane	13.092	93	263539	20.07 ug/L	97

Sample : LCS
Misc : X1; 5mL;
Data File : SA121317.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 17:34
Operator :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 14 10:59:55 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

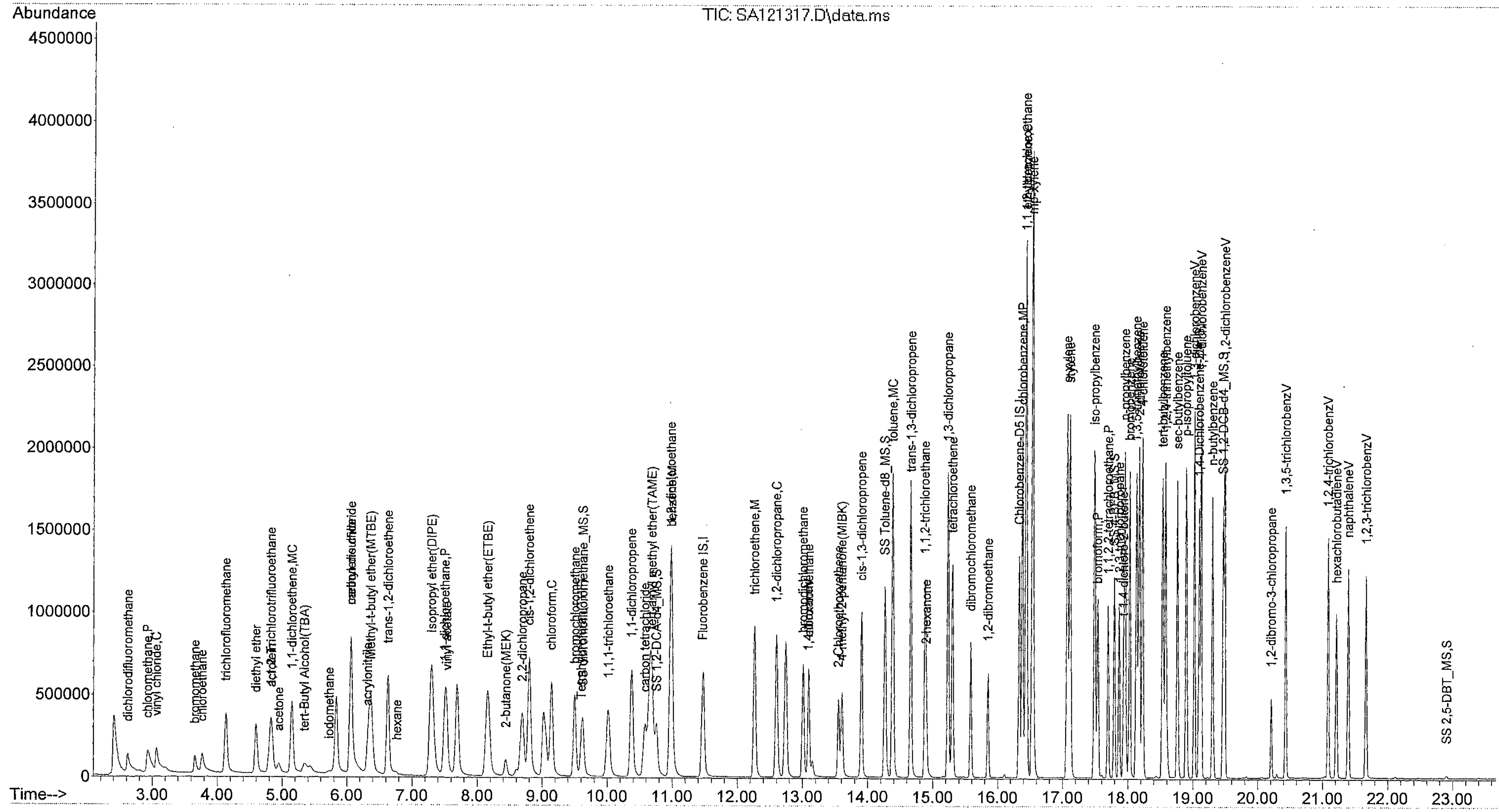
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
43) bromodichloromethane	13.007	83	519550	22.62 ug/L		100
44) 2-Chloroethoxyethene	13.549	63	224453	44.83 ug/L		99
45) 4-methyl-2-pentanone(M...	13.603	58	161100	20.30 ug/L		96
46) cis-1,3-dichloropropene	13.908	75	565726	21.60 ug/L		98
49) toluene	14.382	91	1554859	21.08 ug/L		99
50) trans-1,3-dichloropropene	14.662	75	465704	18.53 ug/L		99
51) 1,1,2-trichloroethane	14.875	83	310490	20.79 ug/L		100
52) 2-hexanone	14.899	43	310866	19.39 ug/L		99
53) tetrachloroethene	15.301	166	407031	20.25 ug/L		99
54) 1,3-dichloropropane	15.228	76	615783	21.33 ug/L		99
55) dibromochloromethane	15.581	129	401618	20.68 ug/L		98
56) 1,2-dibromoethane	15.848	107	388262	20.51 ug/L		100
57) chlorobenzene	16.378	112	1038774	21.05 ug/L		99
58) 1,1,1,2-tetrachloroethane	16.432	131	328335	20.72 ug/L		100
59) ethylbenzene	16.438	91	1634389	21.34 ug/L		100
60) mp-xylene 40ppb	16.536	106	1245739	44.43 ug/L		99
61) o-xylene	17.071	106	644544	21.03 ug/L		100
62) styrene	17.114	104	1118298	21.79 ug/L		100
63) bromoform	17.533	173	272587	19.15 ug/L	#	92
64) iso-propylbenzene	17.491	105	1382059	22.15 ug/L		99
67) bromobenzene	18.026	156	476269	20.35 ug/L		98
68) 1,1,2,2-tetrachloroethane	17.698	83	477622	21.18 ug/L		100
69) 1,2,3-trichloropropane	17.868	110	138795	20.17 ug/L		99
70) t-1,4-dichloro-2-butene	17.929	53	140647	38.04 ug/L	#	78
71) n-propylbenzene	17.953	91	1606018	22.52 ug/L		99
72) 2-chlorotoluene	18.172	91	1050554	21.15 ug/L		100
73) 4-chlorotoluene	18.221	91	1131275	22.20 ug/L		99
74) 1,3,5-trimethylbenzene	18.130	105	1108227	21.58 ug/L		100
75) tert-butylbenzene	18.531	119	890603	21.48 ug/L		100
76) 1,2,4-trimethylbenzene	18.574	105	1161922	21.76 ug/L		100
77) sec-butylbenzene	18.756	105	1183971	21.21 ug/L		100
78) 1,3-dichlorobenzeneV	19.018	146	763701	21.98 ug/L		100
79) p-isopropyltoluene	18.890	119	1041460	21.78 ug/L		100
80) 1,4-dichlorobenzeneV	19.121	146	769640	21.82 ug/L		99
81) 1,2-dichlorobenzeneV	19.486	146	748342	22.07 ug/L		100
82) n-butylbenzene	19.298	91	871411	21.13 ug/L		100
84) 1,2-dibromo-3-chloropr...	20.204	75	83830	17.42 ug/L		95
85) 1,3,5-trichlorobenzV	20.429	180	448261	19.72 ug/L		100
86) 1,2,4-trichlorobenzV	21.080	180	425539	20.32 ug/L		100
87) hexachlorobutadieneV	21.208	225	192849	18.53 ug/L		99
88) naphthaleneV	21.390	128	942594	21.28 ug/L		99
89) 1,2,3-trichlorobenzV	21.664	180	391322	20.51 ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Sample : LCS
Misc : X1; 5mL;
Data File : SA121317.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 17:34
Operator :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 14 10:59:55 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration



4VID1213.M Thu Dec 22 13:41:01 2016

8260B

Support Data

VOAMS4 Analysis Run Log

IS/SS ID= V-4530

Analyst: Bmc

Standard ID= V-4525

Gas Standard ID= V-4526

Date: 12/13/16

LCS/LCSD and/or MS/MSD Standard ID= V-4514 4522

ALS	Data File	Sample Name	RR	AQ	SD	Dilution	Aq Meth	An Meth	Comments	pH<2	A
1	5B121301	BFB 25ng					VOCMS	4410 1213			✓
2	02	STD 0.2					VOCMS				✓
3	03	STD 0.5					VOCMS				✓
4	04	STD 1.0					VOCMS				✓
5	05	STD 2.0					VOCMS				✓
6	06	STD 5.0					VOCMS				✓
7	07	STD 10					VOCMS				✓
8	08	STD 20					VOCMS				✓
9	09	STD 50					VOCMS				✓
10	10	STD 100					VOCMS				✓
11	11	Blank					VOCMS				
12	12	STD 200					VOCMS				✓
13	13	Blank					VOCMS				
14	14	STD300					VOCMS				✓
15	15	Blank					VOCMS				
16	16	Blank					VOCMS				
17	17	LCS		✓			VOCMS				✓
18	18	STD20					VOCMS				✓
19	19	LCS		✓			VOCMS				✓
20	20	LCSD		✓			VOCMS				✓
21	21	STD 2					VOCMS				✓
22	22	Blk		✓			VOCMS				✓
23	23	163786.01		✓		1	VOCMS			✓	✓
24	24	.02		✓		1	VOCMS			✓	✓
25	25	.03		✓		1	VOCMS			✓	✓
26	26	.04		✓		1	VOCMS			✓	✓
27	27	.05		✓		1	VOCMS			✓	✓
28	28	.06		✓		1	VOCMS			✓	✓
29	29	.07		✓		1	VOCMS			✓	✓
30	30	163804.07		✓		1	VOCMS			✓	✓
31	31	MS		✓		1	VOCMS		P= 163786.03	✓	✓
32	32	MSD		✓		1	VOCMS		↓	✓	✓
33	33	Blk		✓			VOCMS				.
34	34	Blk		✓			VOCMS				
35	35	163824.01		✓		1	VOCMS			7	✓
36	36	.02		✓		1	VOCMS			7	✓
							~~VOCMS~~				
							~~VOCMS~~				
							~~VOCMS~~				
							~~VOCMS~~				
							~~VOCMS~~				
							~~VOCMS~~		Bmc 12/14/16		
							~~VOCMS~~				
							~~VOCMS~~				
							~~VOCMS~~				
							~~VOCMS~~				

Samples removed from autosampler, order and pH verified by Bmc 12/14/16

GC/MS QA-QC Check Report

Tune File : C:\msdchem\1\data\2016\DEC16\DEC1316\SA121318.D
Tune Time : 13 Dec 2016 18:09

Daily Calibration File : C:\msdchem\1\data\2016\DEC16\DEC1316\SA121318.D

File	Sample	Surrogate Recovery %				Internal Standard Responses		
						915645	710291	352362
SA121319.D	LCSaA12131	100	99	100	100	918105	711831	357746
		99	2*					
SA121320.D	LCSDA12131	101	98	101	100	910840	706265	356480
		101	1*					
SA121321.D	STD 2	101	102	100	100	898491	701015	345535
		101	4*					
SA121322.D	BlnkA12131	103	103	100	101	890537	695343	339852
		102	0*					
SA121323.D	163786.01	102	101	100	100	895983	690978	340921
	x1	102	0*					
SA121324.D	163786.02	100	101	99	100	892408	692302	339747
	x1	101	0*					
SA121325.D	163786.03	102	103	100	101	884787	689353	339650
	x1	102	0*					
SA121326.D	163786.04	101	101	99	98	885431	693379	337819
	x1	101	0*					
SA121327.D	163786.05	102	105	100	100	869225	683010	327839
	x1	102	0*					
SA121328.D	163786.06	102	104	101	99	878199	682432	327986
	x1	102	0*					
SA121329.D	163786.07	103	104	99	99	867555	682837	337282
	x1	100	0*					
SA121331.D	MSpkA12131	100	100	102	102	882134	671559	340407
	x1	100	0*					
SA121332.D	MSDuA12131	101	100	100	99	884708	691142	336357
	x1	100	0*					

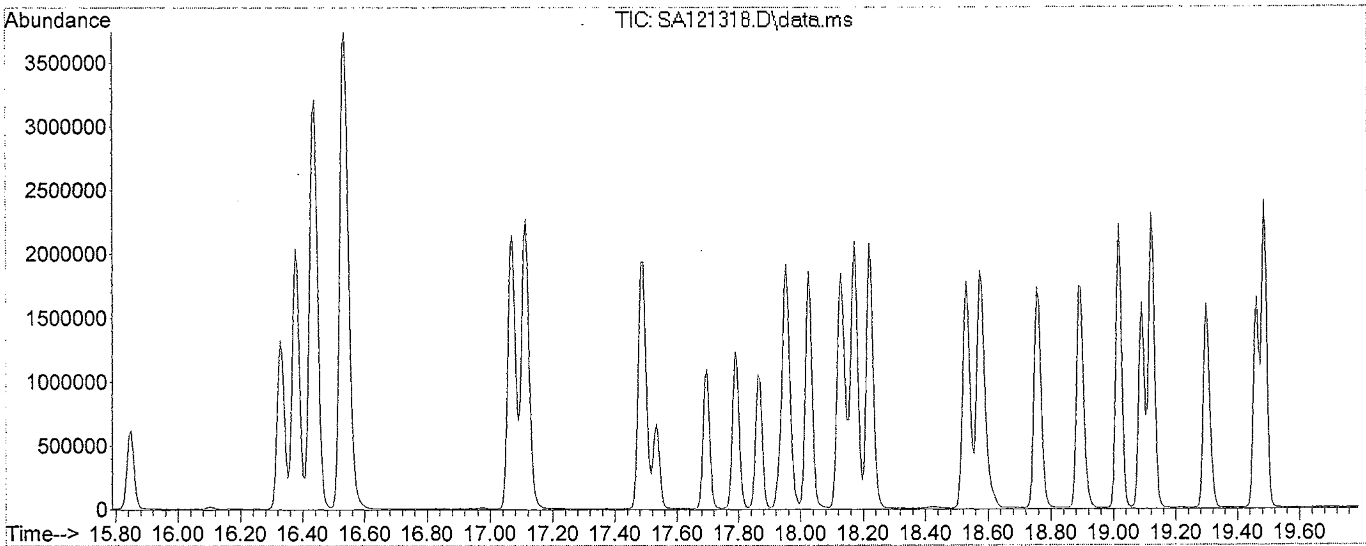
parent= 163786.03

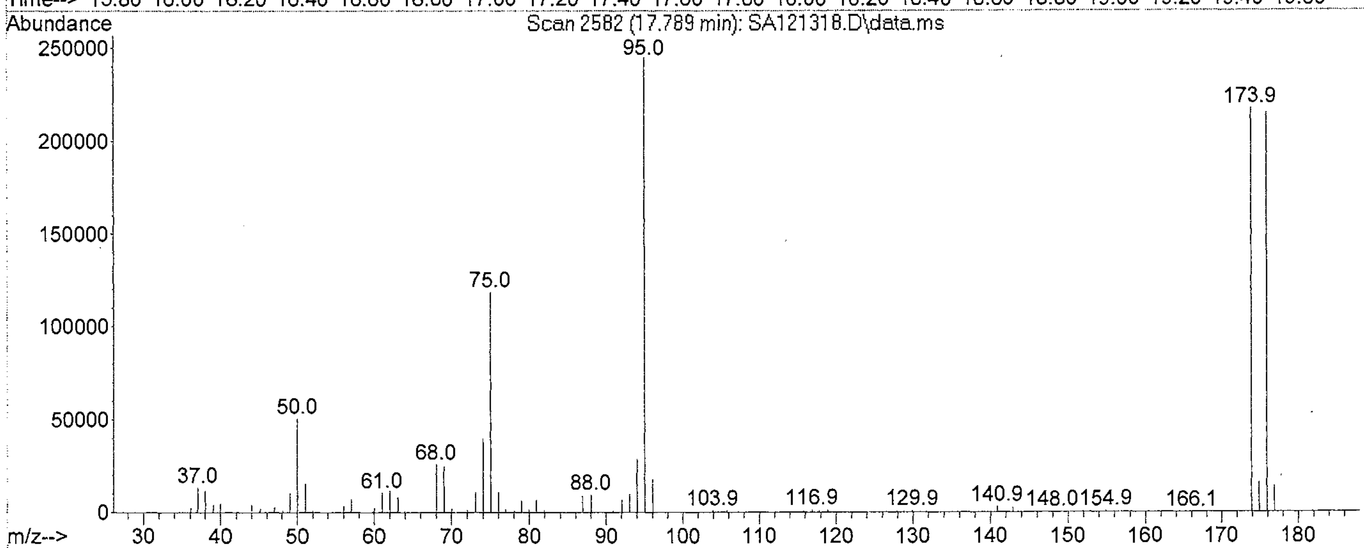
(fails) - fails 12hr time check * - fails criteria

Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Data File : SA121318.D
Acq On : 13 Dec 2016 18:09
Operator :
Sample : STD 20
Misc : X1; 5mL;
ALS Vial : 18 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\2015\4VID1213.M
Title : 8260/624
Last Update : Wed Dec 14 07:58:38 2016





Spectrum Information: Scan 2582

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.8	50792	PASS
75	95	30	60	48.6	118720	PASS
95	95	100	100	100.0	244416	PASS
96	95	5	9	7.3	17800	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	88.8	217152	PASS
175	174	5	9	7.4	16062	PASS
176	174	95	101	99.0	214912	PASS
177	176	5	9	6.5	13917	PASS

Evaluate Continuing Calibration Report

Sample : STD 20
Misc : X1; 5mL;
Data File : SA121318.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 18:09
Operator :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 14 11:12:24 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	10.000	10.000	0.0	92	0.00
2		dichlorodifluoromethane	20.000	17.897	10.5	93	0.00
3	P	chloromethane	20.000	19.038	4.8	94	0.00
4	C	vinyl chloride	20.000	21.579	-7.9	91	0.00
5		bromomethane	20.000	17.573	12.1	103	0.00
6		chloroethane	20.000	21.249	-6.2	91	0.00
7		trichlorofluoromethane	20.000	19.829	0.9	94	0.00
8		diethyl ether	20.000	19.471	2.6	85	0.00
9		1,1,2-Trichlorotrifluoroeth	20.000	18.720	6.4	94	0.00
10		acrolein	20.000	19.956	0.2	94	0.00
11		acetone	20.000	11.159	44.2#	49	0.00
12	MC	1,1-dichloroethene	20.000	19.490	2.6	90	0.00
13		tert-Butyl Alcohol(TBA)	100.000	92.482	7.5	109	0.00
14		iodomethane	20.000	2.885	85.6#	19	0.01
15		methylene chloride	20.000	21.298	-6.5	89	0.00
16		carbon disulfide	20.000	19.053	4.7	88	0.00
17		acrylonitrile	20.000	19.526	2.4	86	0.00
18		Methyl-t-butyl ether(MTBE)	40.000	45.170	-12.9	103	0.00
19		trans-1,2-dichloroethene	20.000	19.813	0.9	88	0.00
20		hexane	20.000	16.780	16.1	89	0.00
21		Isopropyl ether(DIPE)	20.000	21.439	-7.2	94	0.00
22		vinyl acetate	20.000	18.644	6.8	102	0.00
23	P	1,1-dichloroethane	20.000	20.819	-4.1	93	0.00
24		Ethyl-t-butyl ether(ETBE)	20.000	23.159	-15.8	118	0.00
25		2,2-dichloropropane	20.000	17.222	13.9	120	0.00
26		cis-1,2-dichloroethene	20.000	19.956	0.2	90	0.00
27		2-butanone(MEK)	20.000	16.496	17.5	72	0.00
28		bromochloromethane	20.000	20.460	-2.3	90	0.00
29		Tetrahydrofuran(THF)	20.000	18.950	5.3	87	0.00
30	C	chloroform	20.000	20.405	-2.0	91	0.00
31	S	SS dibromofluoromethane_MS	10.000	10.080	-0.8	92	0.00
32		1,1,1-trichloroethane	20.000	18.143	9.3	103	0.00
33		carbon tetrachloride	20.000	16.180	19.1	100	0.01
34		1,1-dichloropropene	20.000	19.450	2.8	89	0.00
35	S	SS 1,2-DCA-d4_MS	10.000	9.968	0.3	91	0.00
36		tert-amyl methyl ether(TAME	20.000	18.130	9.4	108	0.00
37	M	benzene	20.000	20.097	-0.5	89	0.00
38		1,2-dichloroethane	20.000	20.256	-1.3	91	0.00
39	M	trichloroethene	20.000	19.649	1.8	90	0.00
40	C	1,2-dichloropropane	20.000	21.249	-6.2	93	0.00
41		1,4-dioxaneV	40.000	39.314	1.7	93	0.00
42		dibromomethane	20.000	20.627	-3.1	89	0.00
43		bromodichloromethane	20.000	21.597	-8.0	95	0.00
44		2-Chloroethoxyethene	20.000	17.238	13.8	81	0.00
45		4-methyl-2-pentanone(MIBK)	20.000	19.704	1.5	90	0.00
46		cis-1,3-dichloropropene	20.000	20.781	-3.9	100	0.00
47	I	Chlorobenzene-D5 IS	10.000	10.000	0.0	92	0.00
48	S	SS Toluene-d8_MS	10.000	9.898	1.0	92	0.00
49	MC	toluene	20.000	20.442	-2.2	90	0.00
50		trans-1,3-dichloropropene	20.000	18.443	7.8	103	0.00
51		1,1,2-trichloroethane	20.000	20.850	-4.3	91	0.00
52		2-hexanone	20.000	19.032	4.8	81	0.00
53		tetrachloroethene	20.000	19.270	3.7	88	0.00
54		1,3-dichloropropane	20.000	20.898	-4.5	90	0.00

Evaluate Continuing Calibration Report

Sample : STD 20
Misc : X1; 5mL;
Data File : SA121318.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 18:09
Operator :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 14 11:12:24 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
55		dibromochloromethane	20.000	20.292	-1.5	96	0.00
56		1,2-dibromoethane	20.000	20.231	-1.2	92	0.00
57	MP	chlorobenzene	20.000	20.616	-3.1	91	0.00
58		1,1,1,2-tetrachloroethane	20.000	20.811	-4.1	97	0.00
59	C	ethylbenzene	20.000	20.635	-3.2	89	0.00
60		mp-xylene	40.000	43.495	-8.7	89	0.00
61		o-xylene	20.000	20.166	-0.8	90	0.00
62		styrene	20.000	21.381	-6.9	90	0.00
63	P	bromoform	20.000	18.921	5.4	98	0.00
64		iso-propylbenzene	20.000	21.489	-7.4	89	0.00
65	S	SS 4-BFB_MS	10.000	9.904	1.0	91	0.00
66	I	1,4-Dichlorobenzene-D4 IS	10.000	10.000	0.0	91	0.00
67		bromobenzene	20.000	20.553	-2.8	92	0.00
68	P	1,1,2,2-tetrachloroethane	20.000	21.583	-7.9	91	0.00
69		1,2,3-trichloropropane	20.000	20.738	-3.7	94	0.00
70		t-1,4-dichloro-2-butene	20.000	17.556	12.2	93	0.00
71		n-propylbenzene	20.000	21.805	-9.0	91	0.00
72		2-chlorotoluene	20.000	21.559	-7.8	91	0.00
73		4-chlorotoluene	20.000	22.208	-11.0	91	0.00
74		1,3,5-trimethylbenzene	20.000	21.425	-7.1	91	0.00
75		tert-butylbenzene	20.000	20.902	-4.5	91	0.00
76		1,2,4-trimethylbenzene	20.000	21.519	-7.6	90	0.00
77		sec-butylbenzene	20.000	20.748	-3.7	88	0.00
78		1,3-dichlorobenzeneV	20.000	22.002	-10.0	91	0.00
79		p-isopropyltoluene	20.000	21.074	-5.4	89	0.00
80		1,4-dichlorobenzeneV	20.000	21.790	-8.9	90	0.00
81		1,2-dichlorobenzeneV	20.000	21.957	-9.8	90	0.00
82		n-butylbenzene	20.000	20.368	-1.8	88	0.00
83	S	SS 1,2-DCB-d4_MS	10.000	10.027	-0.3	91	0.00
84		1,2-dibromo-3-chloropropane	20.000	17.398	13.0	100	0.00
85		1,3,5-trichlorobenzV	20.000	19.865	0.7	89	0.00
86		1,2,4-trichlorobenzV	20.000	20.042	-0.2	89	0.00
87		hexachlorobutadieneV	20.000	19.873	0.6	88	0.00
88		naphthaleneV	20.000	21.079	-5.4	88	0.00
89		1,2,3-trichlorobenzV	20.000	20.424	-2.1	90	0.00
90	S	SS 2,5-DBT_MS	20.000	18.094	9.5	85	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Sample : STD 20
Misc : X1; 5mL;
Data File : SA121318.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 18:09
Operator :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 14 11:12:24 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene IS	1.000	1.000	0.0	92	0.00
2		dichlorodifluoromethane	0.239	0.214	10.5	93	0.00
3	P	chloromethane	0.244	0.232	4.9	94	0.00
4	C	vinyl chloride	0.203	0.180	11.3	91	0.00
5		bromomethane	0.071	0.068	4.2	103	0.00
6		chloroethane	0.117	0.124	-6.0	91	0.00
7		trichlorofluoromethane	0.323	0.320	0.9	94	0.00
8		diethyl ether	0.188	0.183	2.7	85	0.00
9		1,1,2-Trichlorotrifluoroeth	0.136	0.127	6.6	94	0.00
10		acrolein	0.030	0.030	0.0	94	0.00
11		acetone	0.113	0.063	44.2#	49#	0.00
12	MC	1,1-dichloroethene	0.160	0.156	2.5	90	0.00
13		tert-Butyl Alcohol(TBA)	0.018	0.019	-5.6	109	0.00
14		iodomethane	0.075	0.017	77.3#	19#	0.01
15		methylene chloride	0.230	0.195	15.2	89	0.00
16		carbon disulfide	0.621	0.592	4.7	88	0.00
17		acrylonitrile	0.084	0.082	2.4	86	0.00
18		Methyl-t-butyl ether(MTBE)	0.425	0.480	-12.9	103	0.00
19		trans-1,2-dichloroethene	0.210	0.208	1.0	88	0.00
20		hexane	0.225	0.189	16.0	89	0.00
21		Isopropyl ether(DIPE)	0.728	0.780	-7.1	94	0.00
22		vinyl acetate	0.336	0.412	-22.6#	102	0.00
23	P	1,1-dichloroethane	0.382	0.397	-3.9	93	0.00
24		Ethyl-t-butyl ether(ETBE)	0.369	0.432	-17.1	118	0.00
25		2,2-dichloropropane	0.149	0.160	-7.4	120	0.00
26		cis-1,2-dichloroethene	0.230	0.229	0.4	90	0.00
27		2-butanone(MEK)	0.139	0.115	17.3	72	0.00
28		bromochloromethane	0.112	0.115	-2.7	90	0.00
29		Tetrahydrofuran(THF)	0.068	0.064	5.9	87	0.00
30	C	chloroform	0.388	0.396	-2.1	91	0.00
31	S	SS dibromofluoromethane_MS	0.284	0.287	-1.1	92	0.00
32		1,1,1-trichloroethane	0.236	0.263	-11.4	103	0.00
33		carbon tetrachloride	0.177	0.193	-9.0	100	0.01
34		1,1-dichloropropene	0.285	0.278	2.5	89	0.00
35	S	SS 1,2-DCA-d4_MS	0.342	0.341	0.3	91	0.00
36		tert-amyl methyl ether(TAME	0.369	0.433	-17.3	108	0.00
37	M	benzene	0.809	0.813	-0.5	89	0.00
38		1,2-dichloroethane	0.332	0.336	-1.2	91	0.00
39	M	trichloroethene	0.217	0.214	1.4	90	0.00
40	C	1,2-dichloropropane	0.215	0.229	-6.5	93	0.00
41		1,4-dioxaneV	0.003	0.003	0.0	93	0.00
42		dibromomethane	0.144	0.148	-2.8	89	0.00
43		bromodichloromethane	0.251	0.271	-8.0	95	0.00
44		2-Chloroethoxyethene	0.055	0.047	14.5	81	0.00
45		4-methyl-2-pentanone(MIBK)	0.079	0.086	-8.9	90	0.00
46		cis-1,3-dichloropropene	0.247	0.298	-20.6#	100	0.00
47	I	Chlorobenzene-D5 IS	1.000	1.000	0.0	92	0.00
48	S	SS Toluene-d8_MS	1.296	1.283	1.0	92	0.00
49	MC	toluene	1.049	1.065	-1.5	90	0.00
50		trans-1,3-dichloropropene	0.256	0.327	-27.7#	103	0.00
51		1,1,2-trichloroethane	0.211	0.220	-4.3	91	0.00
52		2-hexanone	0.201	0.215	-7.0	81	0.00
53		tetrachloroethene	0.284	0.273	3.9	88	0.00
54		1,3-dichloropropane	0.408	0.426	-4.4	90	0.00

Evaluate Continuing Calibration Report

Sample : STD 20
Misc : X1; 5mL;
Data File : SA121318.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 18:09
Operator :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 14 11:12:24 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
55		dibromochloromethane	0.241	0.278	-15.4	96	0.00
56		1,2-dibromoethane	0.234	0.270	-15.4	92	0.00
57	MP	chlorobenzene	0.697	0.718	-3.0	91	0.00
58		1,1,1,2-tetrachloroethane	0.195	0.233	-19.5	97	0.00
59	C	ethylbenzene	1.101	1.117	-1.5	89	0.00
60		mp-xylene	0.412	0.431	-4.6	89	0.00
61		o-xylene	0.433	0.436	-0.7	90	0.00
62		styrene	0.724	0.774	-6.9	90	0.00
63	P	bromoform	0.164	0.190	-15.9	98	0.00
64		iso-propylbenzene	0.898	0.947	-5.5	89	0.00
65	S	SS 4-BFB_MS	0.505	0.500	1.0	91	0.00
66	I	1,4-Dichlorobenzene-D4 IS	1.000	1.000	0.0	91	0.00
67		bromobenzene	0.665	0.684	-2.9	92	0.00
68	P	1,1,2,2-tetrachloroethane	0.641	0.692	-8.0	91	0.00
69		1,2,3-trichloropropane	0.196	0.203	-3.6	94	0.00
70		t-1,4-dichloro-2-butene	0.091	0.092	-1.1	93	0.00
71		n-propylbenzene	2.043	2.213	-8.3	91	0.00
72		2-chlorotoluene	1.455	1.522	-4.6	91	0.00
73		4-chlorotoluene	1.532	1.609	-5.0	91	0.00
74		1,3,5-trimethylbenzene	1.460	1.564	-7.1	91	0.00
75		tert-butylbenzene	1.179	1.232	-4.5	91	0.00
76		1,2,4-trimethylbenzene	1.536	1.634	-6.4	90	0.00
77		sec-butylbenzene	1.573	1.647	-4.7	88	0.00
78		1,3-dichlorobenzeneV	1.033	1.087	-5.2	91	0.00
79		p-isopropyltoluene	1.359	1.432	-5.4	89	0.00
80		1,4-dichlorobenzeneV	1.058	1.093	-3.3	90	0.00
81		1,2-dichlorobenzeneV	1.003	1.058	-5.5	90	0.00
82		n-butylbenzene	1.168	1.195	-2.3	88	0.00
83	S	SS 1,2-DCB-d4_MS	0.974	0.976	-0.2	91	0.00
84		1,2-dibromo-3-chloropropane	0.094	0.119	-26.6#	100	0.00
85		1,3,5-trichlorobenzV	0.646	0.642	0.6	89	0.00
86		1,2,4-trichlorobenzV	0.596	0.597	-0.2	89	0.00
87		hexachlorobutadieneV	0.296	0.294	0.7	88	0.00
88		naphthaleneV	1.259	1.327	-5.4	88	0.00
89		1,2,3-trichlorobenzV	0.542	0.554	-2.2	90	0.00
90	S	SS 2,5-DBT_MS	0.199	0.180	9.5	85	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Sample : STD 20
Misc : X1; 5mL;
Data File : SA121318.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 18:09
Operator :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 14 11:12:24 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.468	96	915645	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	710291	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	352362	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluorömethan...	9.619	111	262505	10.08 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	100.80%	
35) SS 1,2-DCA-d4_MS	10.756	65	312027	9.97 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	99.70%	
48) SS Toluene-d8_MS	14.260	98	911099	9.90 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	99.00%	
65) SS 4-BFB_MS	17.789	95	355055	9.90 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	99.00%	
83) SS 1,2-DCB-d4_MS	19.462	152	343986	10.03 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	100.30%	
90) SS 2,5-DBT_MS	22.899	250	126961	18.09 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery =	45.23%#	
Target Compounds					Qvalue
2) dichlorodifluoromethane	2.616	85	392022	17.90 ug/L	99
3) chloromethane	2.927	50	425709	19.04 ug/L	98
4) vinyl chloride	3.067	62	330264	21.58 ug/L	94
5) bromomethane	3.657	94	124433	17.57 ug/L #	73
6) chloroethane	3.772	64	227928	21.25 ug/L	99
7) trichlorofluoromethane	4.131	101	585987	19.83 ug/L	99
8) diethyl ether	4.600	59	335745	19.47 ug/L	95
9) 1,1,2-Trichlorotrifluo...	4.831	101	232476	18.72 ug/L	99
10) acrolein	4.819	56	55563	19.96 ug/L	95
11) acetone	4.946	43	115534	11.16 ug/L	98
12) 1,1-dichloroethene	5.147	96	285582	19.49 ug/L	99
13) tert-Butyl Alcohol(TBA)	5.354	59	169677	92.48 ug/L	92
14) iodomethane	5.731	142	31240	2.88 ug/L	92
15) methylene chloride	6.054	84	357482	21.30 ug/L	99
16) carbon disulfide	6.066	76	1083234	19.05 ug/L	100
17) acrylonitrile	6.315	53	150846	19.53 ug/L	97
18) Methyl-t-butyl ether(M...	6.364	73	1756346	45.17 ug/L #	97
19) trans-1,2-dichloroethene	6.632	96	380998	19.81 ug/L	98
20) hexane	6.753	57	345729	16.78 ug/L	98
21) Isopropyl ether(DIPE)	7.295	45	1429128	21.44 ug/L	100
22) vinyl acetate	7.532	43	754959	18.64 ug/L	98
23) 1,1-dichloroethane	7.502	63	727695	20.82 ug/L	100
24) Ethyl-t-butyl ether(ETBE)	8.152	59	790719	23.16 ug/L	99
25) 2,2-dichloropropane	8.688	77	293198	17.22 ug/L	98
26) cis-1,2-dichloroethene	8.797	96	419822	19.96 ug/L	100
27) 2-butanone(MEK)	8.438	43	210199	16.50 ug/L	100
28) bromochloromethane	9.503	128	210120	20.46 ug/L	99
29) Tetrahydrofuran(THF)	9.606	42	117609	18.95 ug/L	98
30) chloroform	9.138	83	724588	20.40 ug/L	99
32) 1,1,1-trichloroethane	10.020	97	482234	18.14 ug/L	95
33) carbon tetrachloride	10.586	117	352850	16.18 ug/L	100
34) 1,1-dichloropropene	10.373	75	508351	19.45 ug/L	100
36) tert-amyl methyl ether...	10.677	73	792135	18.13 ug/L #	85
37) benzene	10.981	78	1488522	20.10 ug/L	100
38) 1,2-dichloroethane	10.975	62	615018	20.26 ug/L	100
39) trichloroethene	12.259	95	391092	19.65 ug/L	99
40) 1,2-dichloropropane	12.600	63	418875	21.25 ug/L	98
41) 1,4-dioxaneV	13.086	88	9514	39.31 ug/L	93
42) dibromomethane	13.092	93	271267	20.63 ug/L	98

Sample : STD 20
Misc : X1; 5mL;
Data File : SA121318.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 18:09
Operator :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 14 11:12:24 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) bromodichloromethane	13.007	83	496870	21.60 ug/L	99
44) 2-Chloroethoxyethene	13.549	63	86446	17.24 ug/L	97
45) 4-methyl-2-pentanone(M...	13.603	58	156621	19.70 ug/L	100
46) cis-1,3-dichloropropene	13.908	75	545146	20.78 ug/L	99
49) toluene	14.382	91	1513442	20.44 ug/L	99
50) trans-1,3-dichloropropene	14.662	75	464728	18.44 ug/L	99
51) 1,1,2-trichloroethane	14.881	83	312298	20.85 ug/L	99
52) 2-hexanone	14.899	43	306019	19.03 ug/L	100
53) tetrachloroethene	15.301	166	388360	19.27 ug/L	100
54) 1,3-dichloropropane	15.228	76	604958	20.90 ug/L	100
55) dibromochloromethane	15.581	129	395204	20.29 ug/L	99
56) 1,2-dibromoethane	15.848	107	384083	20.23 ug/L	100
57) chlorobenzene	16.377	112	1020174	20.62 ug/L	100
58) 1,1,1,2-tetrachloroethane	16.432	131	330656	20.81 ug/L	99
59) ethylbenzene	16.438	91	1587197	20.64 ug/L	99
60) mp-xylene	16.536	106	1223338	43.49 ug/L	99
61) o-xylene	17.071	106	619708	20.17 ug/L	99
62) styrene	17.114	104	1100128	21.38 ug/L	100
63) bromoform	17.533	173	270103	18.92 ug/L	99
64) iso-propylbenzene	17.491	105	1345586	21.49 ug/L	100
67) bromobenzene	18.026	156	481829	20.55 ug/L	100
68) 1,1,2,2-tetrachloroethane	17.698	83	487654	21.58 ug/L	99
69) 1,2,3-trichloropropane	17.868	110	142987	20.74 ug/L	98
70) t-1,4-dichloro-2-butene	17.929	53	65034	17.56 ug/L #	92
71) n-propylbenzene	17.953	91	1559441	21.81 ug/L	99
72) 2-chlorotoluene	18.172	91	1072275	21.56 ug/L	100
73) 4-chlorotoluene	18.221	91	1133687	22.21 ug/L	100
74) 1,3,5-trimethylbenzene	18.130	105	1102118	21.42 ug/L	100
75) tert-butylbenzene	18.531	119	868267	20.90 ug/L	100
76) 1,2,4-trimethylbenzene	18.574	105	1151611	21.52 ug/L	100
77) sec-butylbenzene	18.756	105	1160831	20.75 ug/L	100
78) 1,3-dichlorobenzeneV	19.018	146	765955	22.00 ug/L	100
79) p-isopropyltoluene	18.896	119	1009474	21.07 ug/L	100
80) 1,4-dichlorobenzeneV	19.121	146	770000	21.79 ug/L	100
81) 1,2-dichlorobenzeneV	19.486	146	745915	21.96 ug/L	100
82) n-butylbenzene	19.298	91	842072	20.37 ug/L	100
84) 1,2-dibromo-3-chloropr...	20.204	75	83863	17.40 ug/L	98
85) 1,3,5-trichlorobenzV	20.429	180	452363	19.86 ug/L	99
86) 1,2,4-trichlorobenzV	21.080	180	420567	20.04 ug/L	100
87) hexachlorobutadieneV	21.208	225	207215	19.87 ug/L	98
88) naphthaleneV	21.390	128	935249	21.08 ug/L	100
89) 1,2,3-trichlorobenzV	21.664	180	390377	20.42 ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)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Sample       : STD 20
Misc         : X1; 5mL;
Data File    : SA121318.D
Data Path    : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On       : 13 Dec 2016  18:09
Operator     :
ALS Vial     : 18   Sample Multiplier: 1

Quant Time: Dec 14 11:12:24 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration
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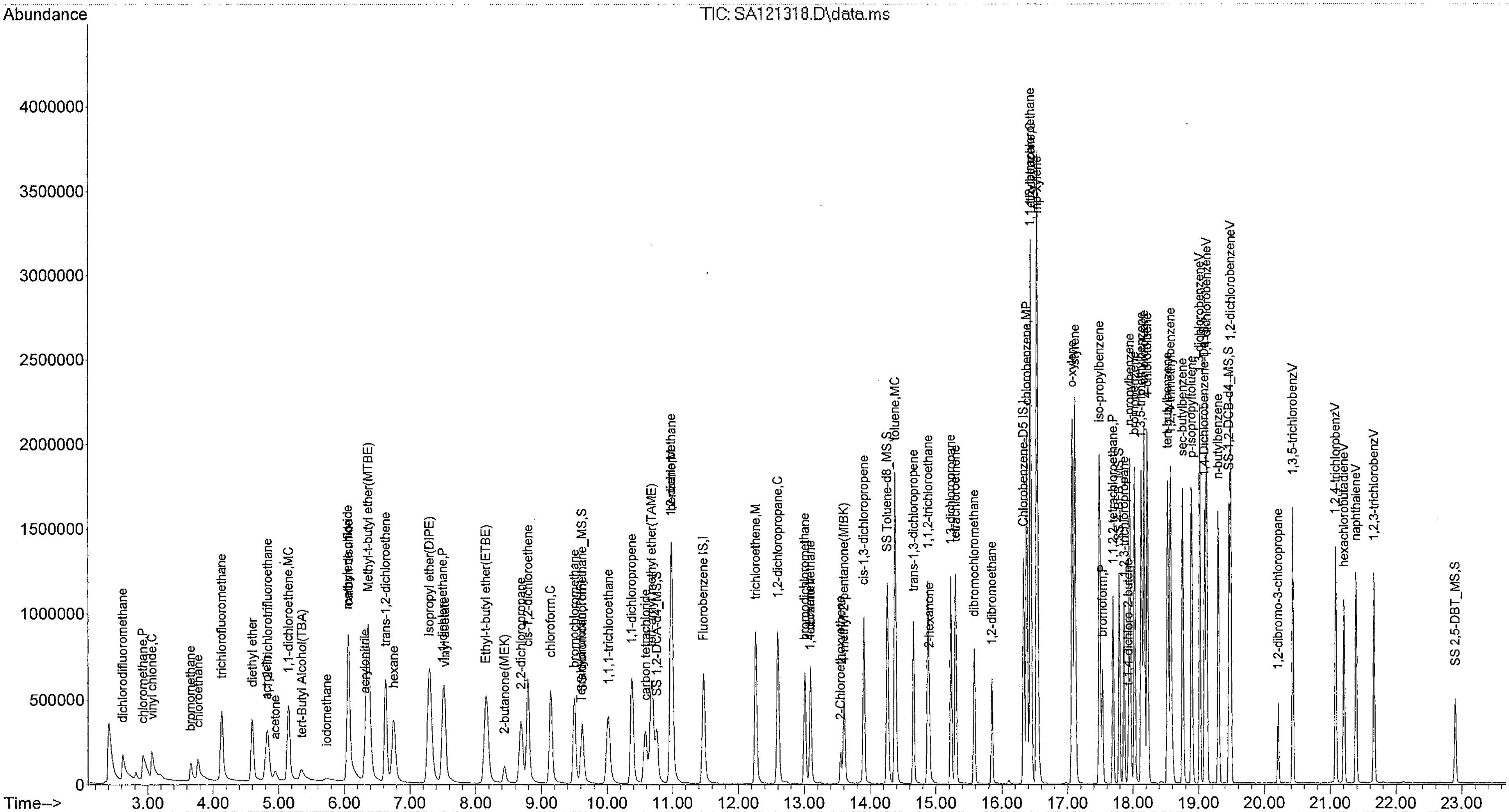

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Sample      : LCSaA121316VNH821
Misc        : X1; 5mL;
Data File   : SA121319.D
Data Path   : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On      : 13 Dec 2016  18:45
Operator    :
ALS Vial    : 19   Sample Multiplier: 1
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20ppb except noted

```
Quant Time: Dec 14 11:13:19 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration
```

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.474	96	918105	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	711831	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	357746	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.625	111	260535	9.98 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.80%		
35) SS 1,2-DCA-d4_MS	10.756	65	310535	9.89 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 98.90%		
48) SS Toluene-d8_MS	14.261	98	919024	9.96 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.60%		
65) SS 4-BFB_MS	17.789	95	360038	10.02 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.20%		
83) SS 1,2-DCB-d4_MS	19.462	152	345838	9.93 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.30%		
90) SS 2,5-DBT_MS	22.899	250	5712	0.80 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery = 2.00%#		
Target Compounds					Qvalue
2) dichlorodifluoromethane	2.617	85	286931	13.06 ug/L	98
3) chloromethane	2.933	50	394860	17.61 ug/L	100
4) vinyl chloride	3.067	62	281244	18.19 ug/L	98
5) bromomethane	3.657	94	132196	18.61 ug/L	87
6) chloroethane	3.766	64	213889	19.89 ug/L	99
7) trichlorofluoromethane	4.137	101	524252	17.69 ug/L	99
8) diethyl ether	4.600	59	274859	15.90 ug/L	97
9) 1,1,2-Trichlorotrifluo...	4.825	101	243687	19.57 ug/L	99
10) acrolein	4.825	56	44074	15.79 ug/L	94
11) acetone	4.947	43	120162	11.57 ug/L	100
12) 1,1-dichloroethene	5.147	96	261711	17.81 ug/L	99
13) tert-Butyl Alcohol(TBA) 100ppb	5.354	59	173020	94.05 ug/L #	71
14) iodomethane	5.725	142	45198	4.17 ug/L	92
15) methylene chloride	6.060	84	329030	19.55 ug/L	100
16) carbon disulfide	6.066	76	920031	16.14 ug/L	100
17) acrylonitrile	6.321	53	151413	19.55 ug/L	92
18) Methyl-t-butyl ether(M...	6.364	73	895942	22.98 ug/L #	97
19) trans-1,2-dichloroethene	6.632	96	356549	18.49 ug/L	98
20) hexane	6.753	57	5562	0.27 ug/L #	83
21) Isopropyl ether(DIPE)	7.295	45	1395554	20.88 ug/L	100
22) vinyl acetate	7.532	43	732797	18.05 ug/L	99
23) 1,1-dichloroethane	7.502	63	682702	19.48 ug/L	99
24) Ethyl-t-butyl ether(ETBE)	8.165	59	760498	22.24 ug/L	99
25) 2,2-dichloropropane	8.688	77	270258	15.86 ug/L	98
26) cis-1,2-dichloroethene	8.797	96	393535	18.66 ug/L	92
27) 2-butanone(MEK)	8.432	43	202509	15.85 ug/L	98
28) bromochloromethane	9.497	128	208963	20.29 ug/L	98
29) Tetrahydrofuran(THF)	9.607	42	145209	23.33 ug/L	95
30) chloroform	9.144	83	705841	19.82 ug/L	100
32) 1,1,1-trichloroethane	10.020	97	469485	17.62 ug/L	94
33) carbon tetrachloride	10.580	117	348128	15.92 ug/L	99
34) 1,1-dichloropropene	10.373	75	495048	18.89 ug/L	99
36) tert-amyl methyl ether...	10.683	73	795179	18.15 ug/L #	79
37) benzene	10.981	78	1435696	19.33 ug/L	100
38) 1,2-dichloroethane	10.975	62	589867	19.38 ug/L	100
39) trichloroethene	12.259	95	380054	19.04 ug/L	99
40) 1,2-dichloropropane	12.600	63	398797	20.18 ug/L	98
41) 1,4-dioxaneV	13.080	88	5993	24.70 ug/L #	73
42) dibromomethane	13.092	93	260194	19.73 ug/L	98

Quantitation Report (Not Reviewed)

Sample : LCSaA121316VNH821
Misc : X1; 5mL;
Data File : SA121319.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 18:45
Operator :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Dec 14 11:13:19 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43)	bromodichloromethane	13.007	83	509420	22.08	ug/L	100
44)	2-Chloroethoxyethene	13.555	63	230637	45.87	ug/L	98
45)	4-methyl-2-pentanone(M...	13.604	58	160351	20.12	ug/L	94
46)	cis-1,3-dichloropropene	13.908	75	551126	20.95	ug/L	99
49)	toluene	14.382	91	1464978	19.72	ug/L	100
50)	trans-1,3-dichloropropene	14.656	75	464219	18.38	ug/L	98
51)	1,1,2-trichloroethane	14.875	83	305954	20.38	ug/L	100
52)	2-hexanone	14.899	43	317450	19.70	ug/L	99
53)	tetrachloroethene	15.301	166	380330	18.83	ug/L	100
54)	1,3-dichloropropane	15.228	76	602847	20.78	ug/L	99
55)	dibromochloromethane	15.581	129	400141	20.50	ug/L	100
56)	1,2-dibromoethane	15.848	107	391676	20.59	ug/L	98
57)	chlorobenzene	16.378	112	999981	20.16	ug/L	99
58)	1,1,1,2-tetrachloroethane	16.432	131	323293	20.30	ug/L	100
59)	ethylbenzene	16.438	91	1559910	20.22	ug/L	100
60)	mp-xylene 40ppb	16.536	106	1180528	41.85	ug/L	99
61)	o-xylene	17.071	106	614445	19.95	ug/L	99
62)	styrene	17.114	104	1076289	20.87	ug/L	100
63)	bromoform	17.533	173	275545	19.26	ug/L #	93
64)	iso-propylbenzene	17.485	105	1309567	20.85	ug/L	100
67)	bromobenzene	18.026	156	472710	19.86	ug/L	99
68)	1,1,2,2-tetrachloroethane	17.698	83	477231	20.80	ug/L	99
69)	1,2,3-trichloropropane	17.868	110	136264	19.47	ug/L	99
70)	t-1,4-dichloro-2-butene	17.929	53	139273	37.03	ug/L #	79
71)	n-propylbenzene	17.953	91	1511413	20.79	ug/L	100
72)	2-chlorotoluene	18.172	91	1020077	20.17	ug/L	100
73)	4-chlorotoluene	18.221	91	1085130	20.91	ug/L	100
74)	1,3,5-trimethylbenzene	18.130	105	1062882	20.35	ug/L	100
75)	tert-butylbenzene	18.531	119	838058	19.87	ug/L	100
76)	1,2,4-trimethylbenzene	18.574	105	1125344	20.69	ug/L	100
77)	sec-butylbenzene	18.756	105	1111139	19.53	ug/L	100
78)	1,3-dichlorobenzeneV	19.018	146	744269	21.04	ug/L	99
79)	p-isopropyltoluene	18.896	119	980714	20.17	ug/L	100
80)	1,4-dichlorobenzeneV	19.121	146	753710	20.99	ug/L	99
81)	1,2-dichlorobenzeneV	19.486	146	734090	21.27	ug/L	100
82)	n-butylbenzene	19.298	91	822876	19.59	ug/L	100
84)	1,2-dibromo-3-chloropr...	20.204	75	87628	17.91	ug/L	99
85)	1,3,5-trichlorobenzV	20.429	180	430500	18.62	ug/L	100
86)	1,2,4-trichlorobenzV	21.080	180	420909	19.76	ug/L	99
87)	hexachlorobutadieneV	21.208	225	187244	17.69	ug/L	100
88)	naphthaleneV	21.390	128	925815	20.55	ug/L	100
89)	1,2,3-trichlorobenzV	21.664	180	388554	20.02	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

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Sample     : LCSaA121316VNH821
Misc       : X1; 5mL;
Data File  : SA121319.D
Data Path  : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On     : 13 Dec 2016  18:45
Operator   :
ALS Vial   : 19   Sample Multiplier: 1

Quant Time: Dec 14 11:13:19 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration
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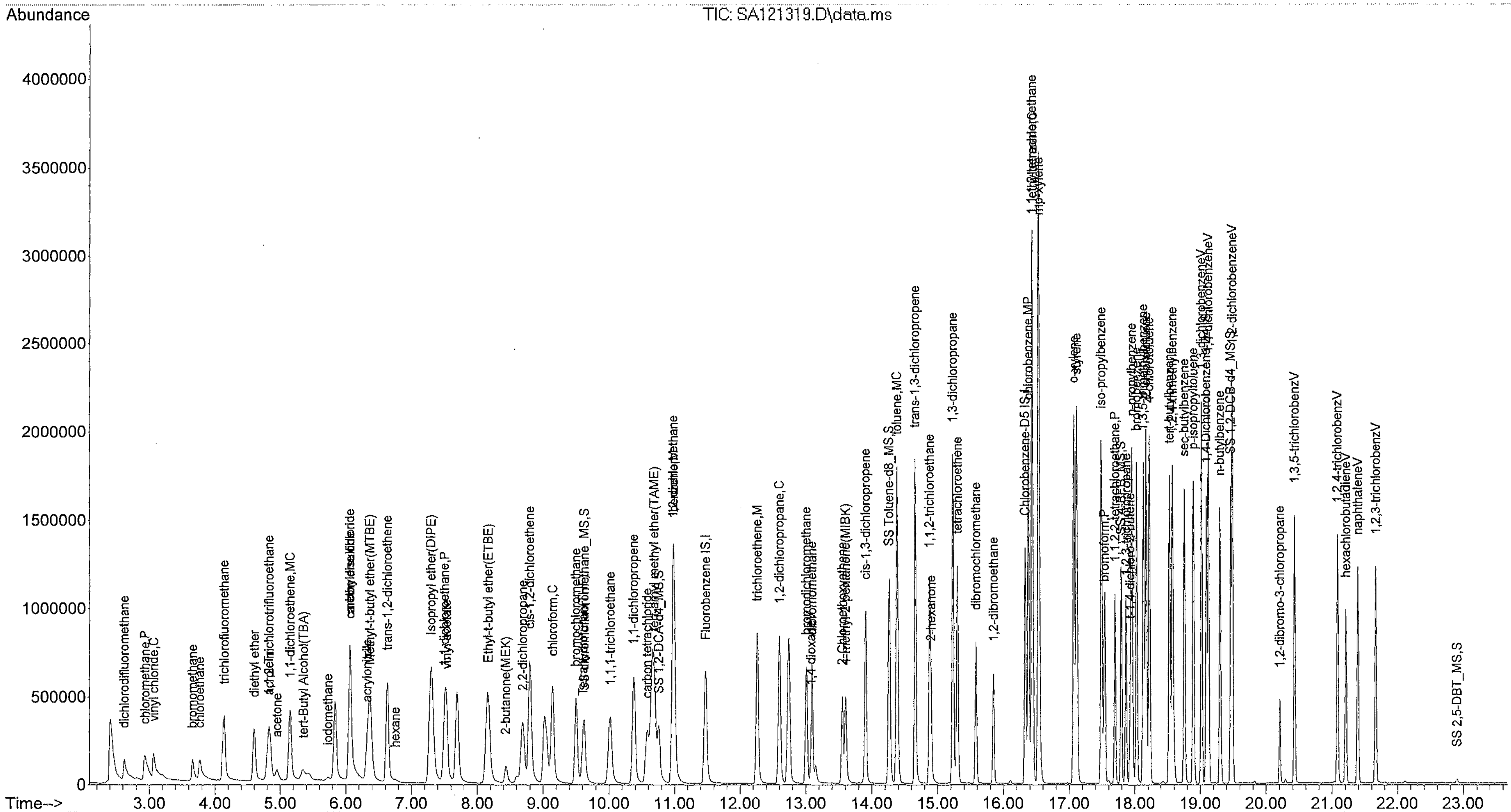


Quantitation Report (Not Reviewed)

Sample : LCSDA121316VNH821
Misc : X1; 5mL;
Data File : SA121320.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 19:20
Operator :
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 14 11:13:23 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

20ppb except noted

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.474	96	910840	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	706265	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	356480	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.625	111	261838	10.11 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	101.10%	
35) SS 1,2-DCA-d4_MS	10.756	65	306584	9.85 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	98.50%	
48) SS Toluene-d8_MS	14.261	98	924755	10.10 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	101.00%	
65) SS 4-BFB_MS	17.789	95	355053	9.96 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	99.60%	
83) SS 1,2-DCB-d4_MS	19.462	152	351789	10.14 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	101.40%	
90) SS 2,5-DBT_MS	22.905	250	1975	0.28 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery =	0.70%#	

Target Compounds	R.T.	QIon	Response	Conc Units	Qvalue
2) dichlorodifluoromethane	2.617	85	299227	13.73 ug/L #	95
3) chloromethane	2.933	50	420047	18.88 ug/L	99
4) vinyl chloride	3.061	62	297236	19.43 ug/L	93
5) bromomethane	3.663	94	148185	20.99 ug/L	82
6) chloroethane	3.766	64	225139	21.10 ug/L	99
7) trichlorofluoromethane	4.138	101	551236	18.75 ug/L	100
8) diethyl ether	4.594	59	279113	16.27 ug/L	99
9) 1,1,2-Trichlorotrifluo...	4.825	101	264124	21.38 ug/L	99
10) acrolein	4.831	56	42668	15.41 ug/L	95
11) acetone	4.947	43	124907	12.13 ug/L	100
12) 1,1-dichloroethene	5.147	96	268607	18.43 ug/L	99
13) tert-Butyl Alcohol(TBA) 100ppb	5.342	59	168237	92.18 ug/L #	79
14) iodomethane	5.719	142	52986	4.92 ug/L #	88
15) methylene chloride	6.060	84	341217	20.44 ug/L	99
16) carbon disulfide	6.066	76	977536	17.28 ug/L	100
17) acrylonitrile	6.315	53	150674	19.61 ug/L	91
18) Methyl-t-butyl ether(M...	6.364	73	911120	23.56 ug/L	97
19) trans-1,2-dichloroethene	6.632	96	369232	19.30 ug/L	97
20) hexane	6.747	57	2397	0.12 ug/L #	38
21) Isopropyl ether(DIPE)	7.295	45	1433726	21.62 ug/L	100
22) vinyl acetate	7.532	43	739632	18.36 ug/L	100
23) 1,1-dichloroethane	7.502	63	717817	20.64 ug/L	99
24) Ethyl-t-butyl ether(ETBE)	8.159	59	780205	22.98 ug/L	99
25) 2,2-dichloropropane	8.694	77	283184	16.73 ug/L	98
26) cis-1,2-dichloroethene	8.798	96	409058	19.55 ug/L	94
27) 2-butanone(MEK)	8.439	43	204919	16.17 ug/L	100
28) bromochloromethane	9.497	128	210644	20.62 ug/L	99
29) Tetrahydrofuran(THF)	9.607	42	147476	23.89 ug/L	98
30) chloroform	9.138	83	730132	20.67 ug/L	99
32) 1,1,1-trichloroethane	10.014	97	495624	18.75 ug/L	94
33) carbon tetrachloride	10.580	117	365327	16.84 ug/L	99
34) 1,1-dichloropropene	10.373	75	513623	19.76 ug/L	99
36) tert-amyl methyl ether...	10.683	73	811409	18.67 ug/L #	79
37) benzene	10.982	78	1493262	20.27 ug/L	100
38) 1,2-dichloroethane	10.975	62	599195	19.84 ug/L	99
39) trichloroethene	12.265	95	393565	19.88 ug/L	100
40) 1,2-dichloropropane	12.600	63	410677	20.94 ug/L	97
41) 1,4-dioxaneV	13.093	88	5592	23.23 ug/L #	76
42) dibromomethane	13.093	93	267371	20.44 ug/L	99

Quantitation Report (Not Reviewed)

Sample : LCSDA121316VNH821
Misc : X1; 5mL;
Data File : SA121320.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 19:20
Operator :
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 14 11:13:23 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

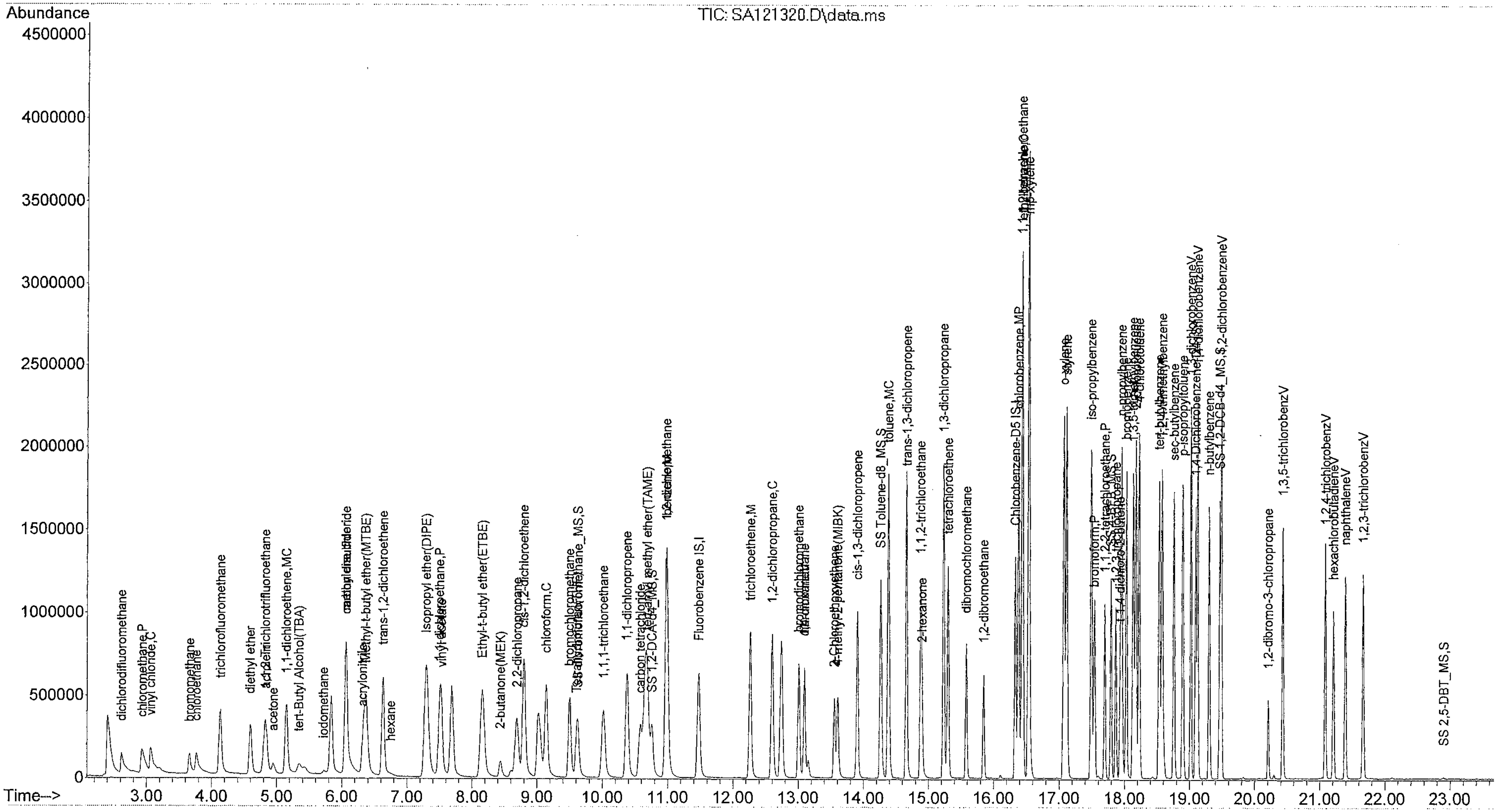
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) bromodichloromethane	13.007	83	523776	22.89	ug/L	99
44) 2-Chloroethoxyethene	13.549	63	224055	44.91	ug/L	100
45) 4-methyl-2-pentanone(M...	13.604	58	156477	19.79	ug/L	96
46) cis-1,3-dichloropropene	13.908	75	566594	21.71	ug/L	99
49) toluene	14.382	91	1530617	20.80	ug/L	99
50) trans-1,3-dichloropropene	14.662	75	469951	18.76	ug/L	99
51) 1,1,2-trichloroethane	14.875	83	312135	20.96	ug/L	99
52) 2-hexanone	14.899	43	308987	19.33	ug/L	99
53) tetrachloroethene	15.301	166	401628	20.04	ug/L	99
54) 1,3-dichloropropane	15.228	76	612403	21.28	ug/L	99
55) dibromochloromethane	15.581	129	407575	21.05	ug/L	99
56) 1,2-dibromoethane	15.848	107	385483	20.42	ug/L	100
57) chlorobenzene	16.378	112	1014878	20.63	ug/L	100
58) 1,1,1,2-tetrachloroethane	16.432	131	330942	20.95	ug/L	99
59) ethylbenzene	16.438	91	1602650	20.97	ug/L	100
60) mp-xylene 40ppb	16.536	106	1233733	44.13	ug/L	100
61) o-xylene	17.071	106	637243	20.86	ug/L	100
62) styrene	17.114	104	1097394	21.45	ug/L	99
63) bromoform	17.534	173	273546	19.27	ug/L #	92
64) iso-propylbenzene	17.491	105	1352755	21.73	ug/L	99
67) bromobenzene	18.026	156	481484	20.30	ug/L	100
68) 1,1,2,2-tetrachloroethane	17.698	83	473841	20.73	ug/L	99
69) 1,2,3-trichloropropane	17.868	110	134706	19.31	ug/L	99
70) t-1,4-dichloro-2-butene	17.929	53	139961	37.35	ug/L #	79
71) n-propylbenzene	17.953	91	1571623	21.72	ug/L	99
72) 2-chlorotoluene	18.172	91	1051152	20.88	ug/L	100
73) 4-chlorotoluene	18.221	91	1121708	21.71	ug/L	100
74) 1,3,5-trimethylbenzene	18.130	105	1091755	20.98	ug/L	99
75) tert-butylbenzene	18.531	119	868306	20.66	ug/L	100
76) 1,2,4-trimethylbenzene	18.574	105	1166763	21.55	ug/L	100
77) sec-butylbenzene	18.756	105	1157321	20.44	ug/L	99
78) 1,3-dichlorobenzeneV	19.018	146	755923	21.45	ug/L	99
79) p-isopropyltoluene	18.896	119	1024810	21.15	ug/L	100
80) 1,4-dichlorobenzeneV	19.121	146	769705	21.52	ug/L	100
81) 1,2-dichlorobenzeneV	19.486	146	746597	21.72	ug/L	100
82) n-butylbenzene	19.298	91	851886	20.37	ug/L	100
84) 1,2-dibromo-3-chloropr...	20.204	75	88171	18.08	ug/L	99
85) 1,3,5-trichlorobenzV	20.429	180	437447	18.99	ug/L	100
86) 1,2,4-trichlorobenzV	21.086	180	425288	20.03	ug/L	100
87) hexachlorobutadieneV	21.208	225	192701	18.27	ug/L	99
88) naphthaleneV	21.390	128	919450	20.48	ug/L	99
89) 1,2,3-trichlorobenzV	21.664	180	390870	20.21	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Sample : LCSDA121316VNH821
Misc : X1; 5mL;
Data File : SA121320.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 19:20
Operator :
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 14 11:13:23 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Sample : STD 2
Misc : X1; 5mL;
Data File : SA121321.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 19:56
Operator :
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Dec 14 11:13:27 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.474	96	898491	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	701015	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	345535	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluorometh an...	9.625	111	259142	10.14 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 101.40%	
35) SS 1,2-DCA-d4_MS	10.756	65	314036	10.22 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 102.20%	
48) SS Toluene-d8_MS	14.266	98	910418	10.02 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 100.20%	
65) SS 4-BFB_MS	17.789	95	354397	10.02 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 100.20%	
83) SS 1,2-DCB-d4_MS	19.462	152	341388	10.15 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 101.50%	
90) SS 2,5-DBT_MS	22.905	250	12028	1.75 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery	= 4.38%#	

Target Compounds	R.T.	QIon	Response	Conc Units	Qvalue
2) dichlorodifluoromethane	2.623	85	38785	1.80 ug/L #	84
3) chloromethane	2.927	50	46735	2.13 ug/L	93
4) vinyl chloride	3.067	62	36419	2.33 ug/L	98
5) bromomethane	3.657	94	10838	1.58 ug/L #	76
6) chloroethane	3.772	64	21199	2.01 ug/L	96
7) trichlorofluoromethane	4.137	101	62601	2.16 ug/L	98
8) diethyl ether	4.606	59	34301	2.03 ug/L	95
9) 1,1,2-Trichlorotrifluo...	4.831	101	25058	2.06 ug/L	99
10) acrolein	4.819	56	5092	1.86 ug/L #	80
11) acetone	4.965	43	14189	1.40 ug/L	100
12) 1,1-dichloroethene	5.147	96	32523	2.26 ug/L	95
13) tert-Butyl Alcohol(TBA)	5.366	59	4918	2.73 ug/L #	45
15) methylene chloride	6.054	84	35100	2.13 ug/L	90
16) carbon disulfide	6.066	76	121776	2.18 ug/L	99
17) acrylonitrile	6.321	53	13265	1.75 ug/L #	77
18) Methyl-t-butyl ether(M...	6.376	73	178443	4.68 ug/L #	92
19) trans-1,2-dichloroethene	6.638	96	42835	2.27 ug/L	95
20) hexane	6.753	57	38838	1.92 ug/L	94
21) Isopropyl ether(DIPE)	7.313	45	147536	2.26 ug/L	99
22) vinyl acetate	7.538	43	60607	1.53 ug/L #	94
23) 1,1-dichloroethane	7.508	63	74669	2.18 ug/L	99
24) Ethyl-t-butyl ether(ETBE)	8.177	59	75561	2.31 ug/L #	86
25) 2,2-dichloropropane	8.688	77	24416	1.50 ug/L #	89
26) cis-1,2-dichloroethene	8.797	96	46012	2.23 ug/L	91
27) 2-butanone(MEK)	8.451	43	20478	1.64 ug/L #	93
28) bromochloromethane	9.503	128	20740	2.06 ug/L	96
29) Tetrahydrofuran(THF)	9.637	42	13386	2.20 ug/L	98
30) chloroform	9.138	83	74294	2.13 ug/L	98
32) 1,1,1-trichloroethane	10.020	97	47626	1.83 ug/L	96
33) carbon tetrachloride	10.580	117	32282	1.51 ug/L	98
34) 1,1-dichloropropene	10.373	75	55816	2.18 ug/L	99
36) tert-amyl methyl ether...	10.689	73	66998	1.56 ug/L	99
37) benzene	10.981	78	163791	2.25 ug/L	99
38) 1,2-dichloroethane	10.975	62	63253	2.12 ug/L	100
39) trichloroethene	12.259	95	42606	2.18 ug/L	98
40) 1,2-dichloropropane	12.600	63	43443	2.25 ug/L	97
41) 1,4-dioxaneV	13.098	88	1002	4.22 ug/L #	57
42) dibromomethane	13.092	93	27482	2.13 ug/L	99
43) bromodichloromethane	13.007	83	47585	2.11 ug/L	97

Quantitation Report (Not Reviewed)

Sample : STD 2
Misc : X1; 5mL;
Data File : SA121321.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 19:56
Operator :
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Dec 14 11:13:27 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 2-Chloroethoxyethene	13.549	63	8444	1.72 ug/L	95
45) 4-methyl-2-pentanone(M...	13.622	58	14671	1.88 ug/L	96
46) cis-1,3-dichloropropene	13.908	75	48367	1.88 ug/L	98
49) toluene	14.382	91	169787	2.26 ug/L	97
50) trans-1,3-dichloropropene	14.662	75	33591	1.35 ug/L	98
51) 1,1,2-trichloroethane	14.875	83	30662	2.07 ug/L	98
52) 2-hexanone	14.917	43	27078	1.71 ug/L	96
53) tetrachloroethene	15.301	166	43524	2.19 ug/L	97
54) 1,3-dichloropropane	15.228	76	60795	2.13 ug/L	99
55) dibromochloromethane	15.581	129	34734	1.81 ug/L	99
56) 1,2-dibromoethane	15.848	107	36140	1.91 ug/L	98
57) chlorobenzene	16.377	112	112605	2.31 ug/L	99
58) 1,1,1,2-tetrachloroethane	16.432	131	29682	1.89 ug/L	99
59) ethylbenzene	16.438	91	180559	2.30 ug/L	98
60) mp-xylene	16.536	106	136215	4.81 ug/L	98
61) o-xylene	17.071	106	66763	2.20 ug/L	98
62) styrene	17.114	104	109204	2.15 ug/L	99
63) bromoform	17.533	173	23441	1.66 ug/L	97
64) iso-propylbenzene	17.491	105	150045	2.37 ug/L	98
67) bromobenzene	18.026	156	50370	2.19 ug/L	96
68) 1,1,2,2-tetrachloroethane	17.698	83	47690	2.15 ug/L	99
69) 1,2,3-trichloropropane	17.868	110	13624	2.01 ug/L	94
70) t-1,4-dichloro-2-butene	17.929	53	5480	1.51 ug/L #	64
71) n-propylbenzene	17.959	91	175848	2.44 ug/L	97
72) 2-chlorotoluene	18.172	91	136736	2.75 ug/L	93
73) 4-chlorotoluene	18.227	91	121066	2.37 ug/L	99
74) 1,3,5-trimethylbenzene	18.130	105	120483	2.39 ug/L	100
75) tert-butylbenzene	18.531	119	92933	2.28 ug/L	98
76) 1,2,4-trimethylbenzene	18.580	105	122544	2.29 ug/L	98
77) sec-butylbenzene	18.762	105	127391	2.27 ug/L	100
78) 1,3-dichlorobenzeneV	19.018	146	83995	2.41 ug/L	98
79) p-isopropyltoluene	18.896	119	110275	2.35 ug/L	97
80) 1,4-dichlorobenzeneV	19.127	146	82489	2.33 ug/L #	90
81) 1,2-dichlorobenzeneV	19.486	146	81057	2.39 ug/L #	88
82) n-butylbenzene	19.304	91	92140	2.23 ug/L	100
84) 1,2-dibromo-3-chloropr...	20.204	75	5919	1.25 ug/L	90
85) 1,3,5-trichlorobenzV	20.429	180	52542	2.35 ug/L	100
86) 1,2,4-trichlorobenzV	21.086	180	46769	2.27 ug/L	98
87) hexachlorobutadieneV	21.208	225	27882	2.73 ug/L	97
88) naphthaleneV	21.390	128	95888	2.20 ug/L	99
89) 1,2,3-trichlorobenzV	21.664	180	43125	2.30 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

```
Sample        : STD 2
Misc          : X1; 5mL;
Data File     : SA121321.D
Data Path     : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On        : 13 Dec 2016  19:56
Operator      :
ALS Vial      : 21   Sample Multiplier: 1

Quant Time: Dec 14 11:13:27 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration
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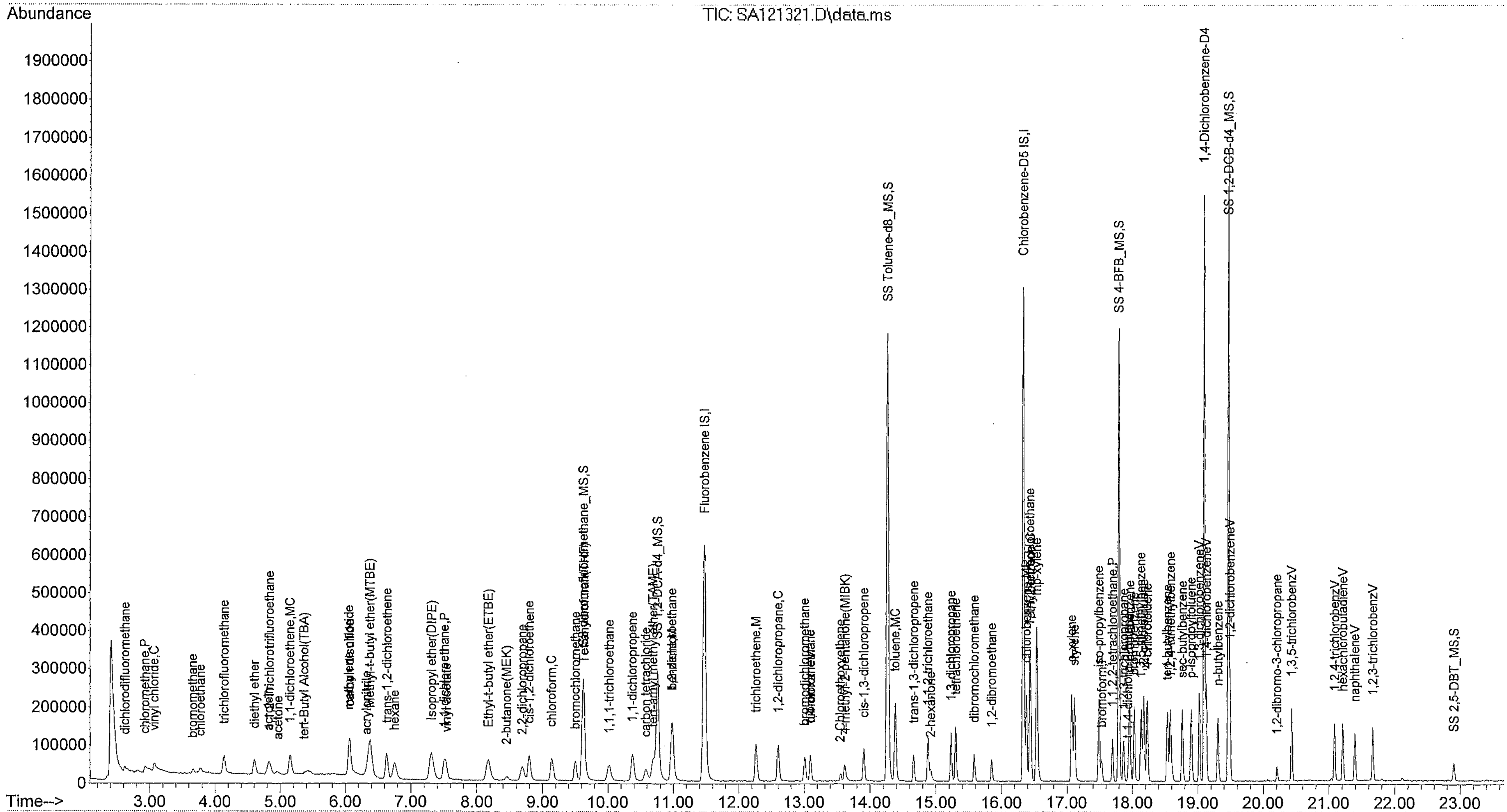

4VID1213.M Thu Dec 22 13:36:30 2016

Quantitation Report (QT Reviewed)

Sample : BlnkA121316VNH821
Misc : X1; 5mL;
Data File : SA121322.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 20:31
Operator :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Dec 14 11:14:01 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	11.474	96	890537	10.00	ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	695343	10.00	ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	339852	10.00	ug/L	0.00
System Monitoring Compounds						
31) SS dibromofluorometh an...	9.631	111	260036	10.27	ug/L	0.01
Spiked Amount 10.000	Range 70 - 130		Recovery	=	102.70%	
35) SS 1,2-DCA-d4_MS	10.756	65	314940	10.34	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	=	103.40%	
48) SS Toluene-d8_MS	14.267	98	899209	9.98	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	=	99.80%	
65) SS 4-BFB_MS	17.795	95	354516	10.10	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	=	101.00%	
83) SS 1,2-DCB-d4_MS	19.462	152	337030	10.19	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	=	101.90%	
90) SS 2,5-DBT_MS	22.905	250	1286	0.19	ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery	=	0.47%#	
Target Compounds						Qvalue
60) mp-xylene	16.548	106	3088	0.11	ug/L	78
77) sec-butylbenzene	18.762	105	5752	0.10	ug/L	97
79) p-isopropyltoluene	18.896	119	5001	0.11	ug/L	95
82) n-butylbenzene	19.304	91	5929	0.15	ug/L	98
85) 1,3,5-trichlorobenzV	20.423	180	3858	0.18	ug/L	98
86) 1,2,4-trichlorobenzV	21.086	180	3266	0.16	ug/L	94
87) hexachlorobutadieneV	21.208	225	3430	0.34	ug/L	95
88) naphthaleneV	21.390	128	6255	0.15	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

```
Sample      : BlnkA121316VNH821
Misc        : X1; 5mL;
Data File   : SA121322.D
Data Path   : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On      : 13 Dec 2016  20:31
Operator    :
ALS Vial    : 22   Sample Multiplier: 1

Quant Time: Dec 14 11:14:01 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration
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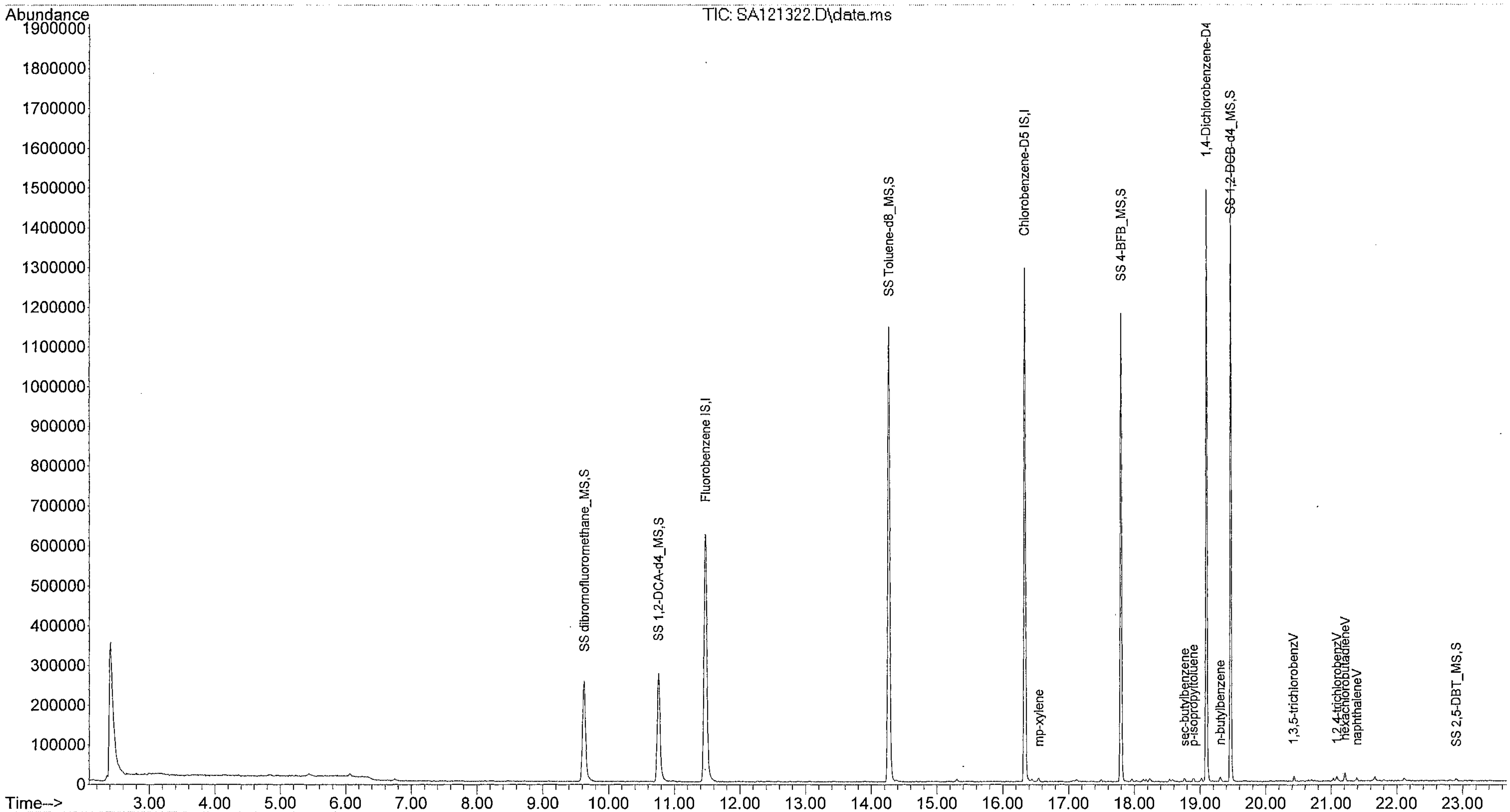


Quantitation Report (Not Reviewed)

Sample : 163786.01
Misc : X1; 5mL;
Data File : SA121323.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 21:06
Operator :
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 14 11:14:11 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.468	96	895983	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	690978	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	340921	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.625	111	260685	10.23 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.30%		
35) SS 1,2-DCA-d4_MS	10.756	65	310568	10.14 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.40%		
48) SS Toluene-d8_MS	14.261	98	895113	10.00 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.00%		
65) SS 4-BFB_MS	17.789	95	347879	9.98 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.80%		
83) SS 1,2-DCB-d4_MS	19.462	152	337924	10.18 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.80%		
90) SS 2,5-DBT_MS	22.899	250	750	0.11 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery = 0.27%#		
Target Compounds					Qvalue
10) acrolein	4.837	56	358	0.13 ug/L #	70
11) acetone	4.953	43	10793	1.07 ug/L #	74
15) methylene chloride	6.054	84	28786	1.75 ug/L	100
49) toluene	14.376	91	9605	0.13 ug/L	96
82) n-butylbenzene	19.304	91	4803	0.12 ug/L	95
85) 1,3,5-trichlorobenzV	20.429	180	3087	0.14 ug/L	86
86) 1,2,4-trichlorobenzV	21.086	180	2190	0.11 ug/L #	84
87) hexachlorobutadieneV	21.202	225	2268	0.22 ug/L	94
88) naphthaleneV	21.397	128	4986	0.12 ug/L	100

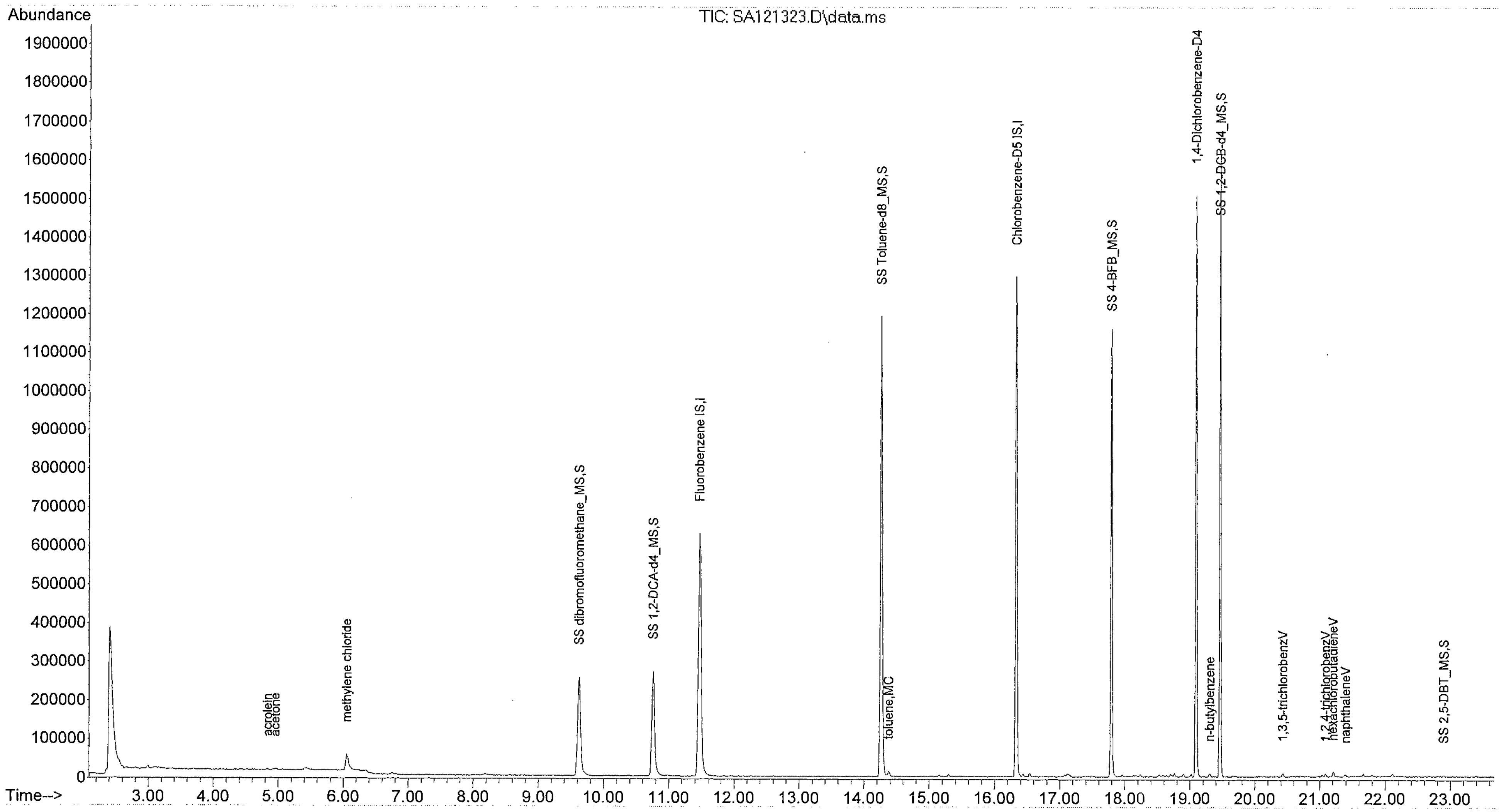
(#) = qualifier out of range (m) = manual integration (+) = signals summed

B— 12/14/16

Quantitation Report (Not Reviewed)

Sample : 163786.01
Misc : X1; 5mL;
Data File : SA121323.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 21:06
Operator :
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 14 11:14:11 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

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Sample      : 163786.02
Misc        : X1; 5mL;
Data File   : SA121324.D
Data Path   : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On      : 13 Dec 2016  21:42
Operator    :
ALS Vial    : 24   Sample Multiplier: 1

Quant Time: Dec 14 11:14:15 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration
```

B~
12/14/16

```
     Compound                          R.T.  QIon  Response  Conc Units Dev(Min)
-------------------------------------------------------------------------------
Internal Standards
  1) Fluorobenzene IS               11.474   96    892408    10.00 ug/L     0.00
 47) Chlorobenzene-D5 IS            16.329  117    692302    10.00 ug/L     0.00
 66) 1,4-Dichlorobenzene-D4 IS      19.091  152    339747    10.00 ug/L     0.00

System Monitoring Compounds
 31) SS dibromofluoromethan...       9.625  111    253855    10.00 ug/L     0.00
  Spiked Amount     10.000   Range  70 - 130    Recovery   =  100.00%
 35) SS 1,2-DCA-d4_MS               10.762   65    309169    10.13 ug/L     0.00
  Spiked Amount     10.000   Range  70 - 130    Recovery   =  101.30%
 48) SS Toluene-d8_MS               14.260   98    888315     9.90 ug/L     0.00
  Spiked Amount     10.000   Range  70 - 130    Recovery   =   99.00%
 65) SS 4-BFB_MS                    17.789   95    348702     9.98 ug/L     0.00
  Spiked Amount     10.000   Range  70 - 130    Recovery   =   99.80%
 83) SS 1,2-DCB-d4_MS               19.462  152    333934    10.10 ug/L     0.00
  Spiked Amount     10.000   Range  70 - 130    Recovery   =  101.00%
 90) SS 2,5-DBT_MS                  22.899  250       603     0.09 ug/L     0.00
  Spiked Amount     40.000   Range  70 - 130    Recovery   =    0.22%#

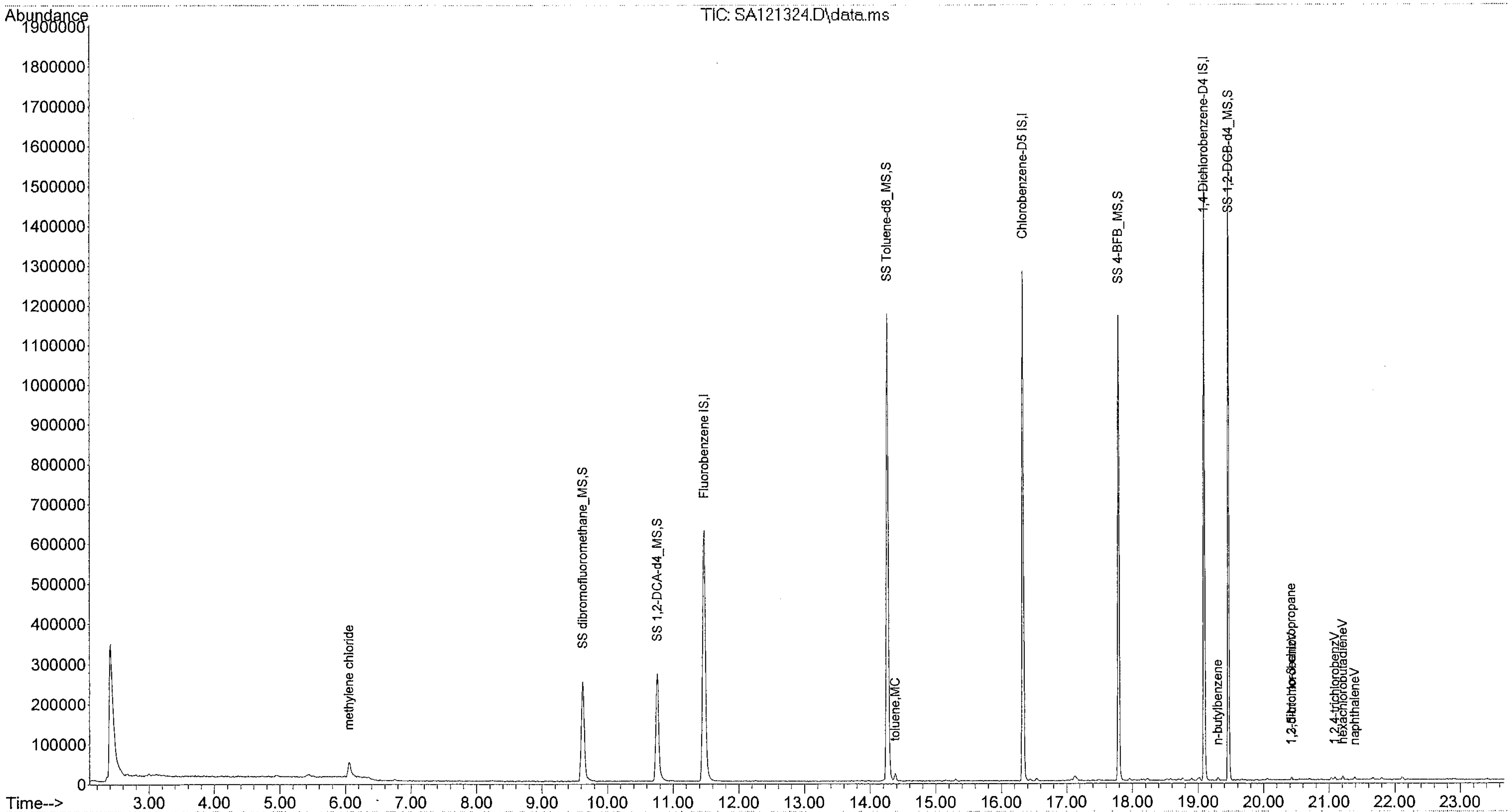
Target Compounds                                                     Qvalue
 15) methylene chloride              6.054   84     24383     1.49 ug/L #    73
 49) toluene                        14.382   91     15112     0.20 ug/L      93
 82) n-butylbenzene                 19.298   91      4087     0.10 ug/L      95
 84) 1,2-dibromo-3-chloropr...      20.423   75       480     0.10 ug/L #     1
 85) 1,3,5-trichlorobenzV           20.429  180      2557     0.12 ug/L      87
 86) 1,2,4-trichlorobenzV           21.086  180      2024     0.10 ug/L #    88
 87) hexachlorobutadieneV           21.208  225      1788     0.18 ug/L #    86
 88) naphthaleneV                   21.390  128      4412     0.10 ug/L      97
-------------------------------------------------------------------------------

(#) = qualifier out of range (m) = manual integration (+) = signals summed
```

Quantitation Report (Not Reviewed)


```
Sample     : 163786.02
Misc       : X1; 5mL;
Data File  : SA121324.D
Data Path  : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On     : 13 Dec 2016  21:42
Operator   :
ALS Vial   : 24   Sample Multiplier: 1

Quant Time: Dec 14 11:14:15 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration
```



Quantitation Report (Not Reviewed)

Sample : 163786.03
Misc : X1; 5mL;
Data File : SA121325.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 22:17
Operator :
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Dec 14 11:14:20 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

B— 12/14/16

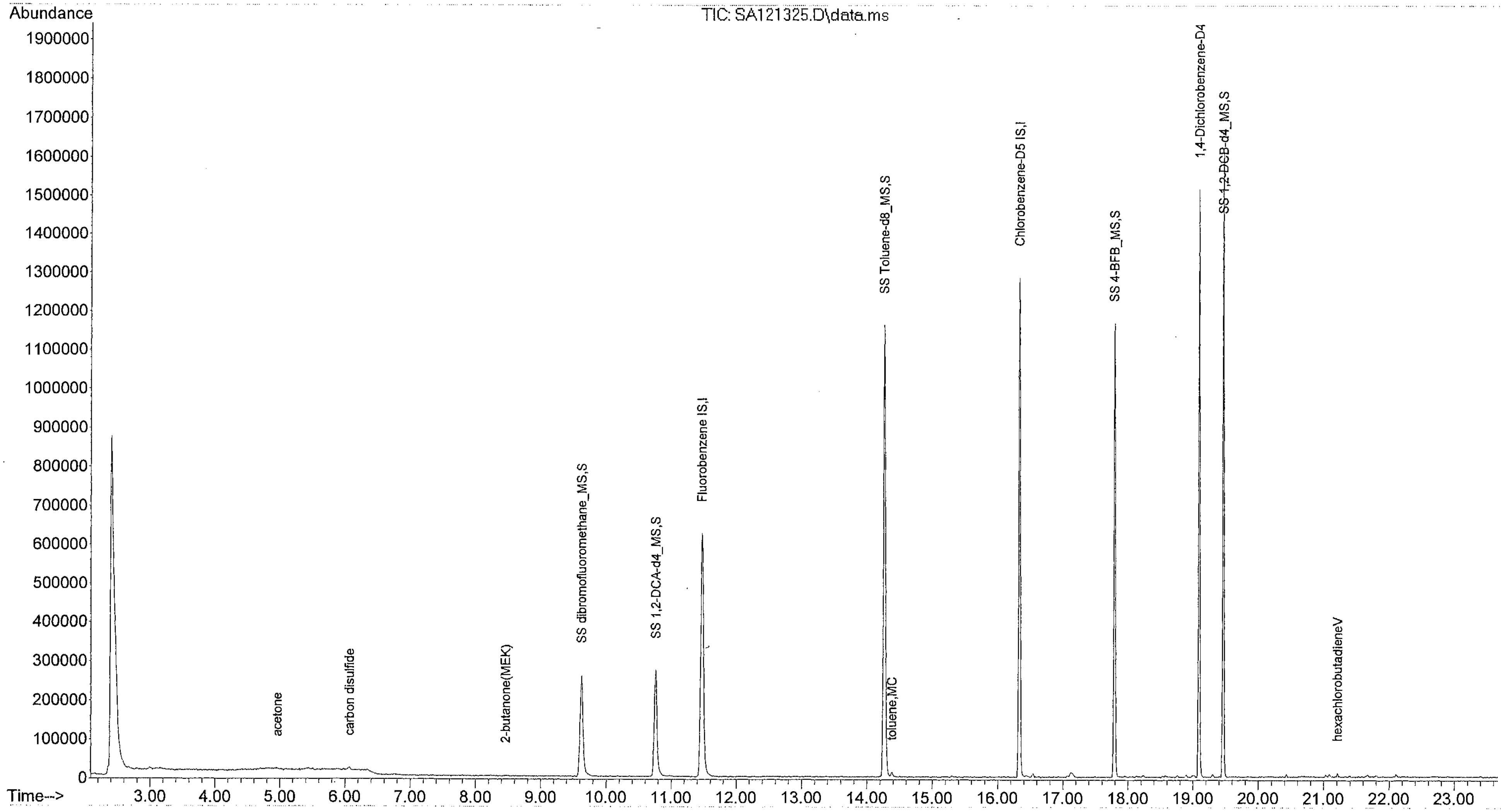
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.468	96	884787	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	689353	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	339650	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluorometan...	9.625	111	257432	10.23 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.30%		
35) SS 1,2-DCA-d4_MS	10.762	65	312517	10.33 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 103.30%		
48) SS Toluene-d8_MS	14.260	98	891886	9.98 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.80%		
65) SS 4-BFB_MS	17.789	95	350967	10.09 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.90%		
83) SS 1,2-DCB-d4_MS	19.462	152	338758	10.24 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.40%		
90) SS 2,5-DBT_MS	22.899	250	612	0.09 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery = 0.22%#		
Target Compounds					Qvalue
11) acetone	4.959	43	6143	0.61 ug/L #	81
16) carbon disulfide	6.066	76	9808	0.18 ug/L #	93
27) 2-butanone(MEK)	8.463	43	3299	0.27 ug/L #	77
49) toluene	14.382	91	8193	0.11 ug/L	93
87) hexachlorobutadieneV	21.208	225	1315	0.13 ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Sample : 163786.03
Misc : X1; 5mL;
Data File : SA121325.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 22:17
Operator :
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Dec 14 11:14:20 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration



Sample : 163786.04
Misc : X1; 5mL;
Data File : SA121326.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 22:52
Operator :
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Dec 14 11:14:25 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.474	96	885431	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	693379	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	337819	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluorometha n...	9.625	111	253998	10.09 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	100.90%	
35) SS 1,2-DCA-d4_MS	10.756	65	305932	10.11 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	101.10%	
48) SS Toluene-d8_MS	14.261	98	889550	9.90 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	99.00%	
65) SS 4-BFB_MS	17.795	95	344604	9.85 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	98.50%	
83) SS 1,2-DCB-d4_MS	19.462	152	331823	10.09 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	100.90%	
90) SS 2,5-DBT_MS	22.905	250	515	0.08 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery =	0.20%#	
Target Compounds					Qvalue
11) acetone	4.959	43	3678	0.37 ug/L	97
41) 1,4-dioxaneV	13.208	88	42	0.18 ug/L #	18
87) hexachlorobutadieneV	21.202	225	1228	0.12 ug/L #	86

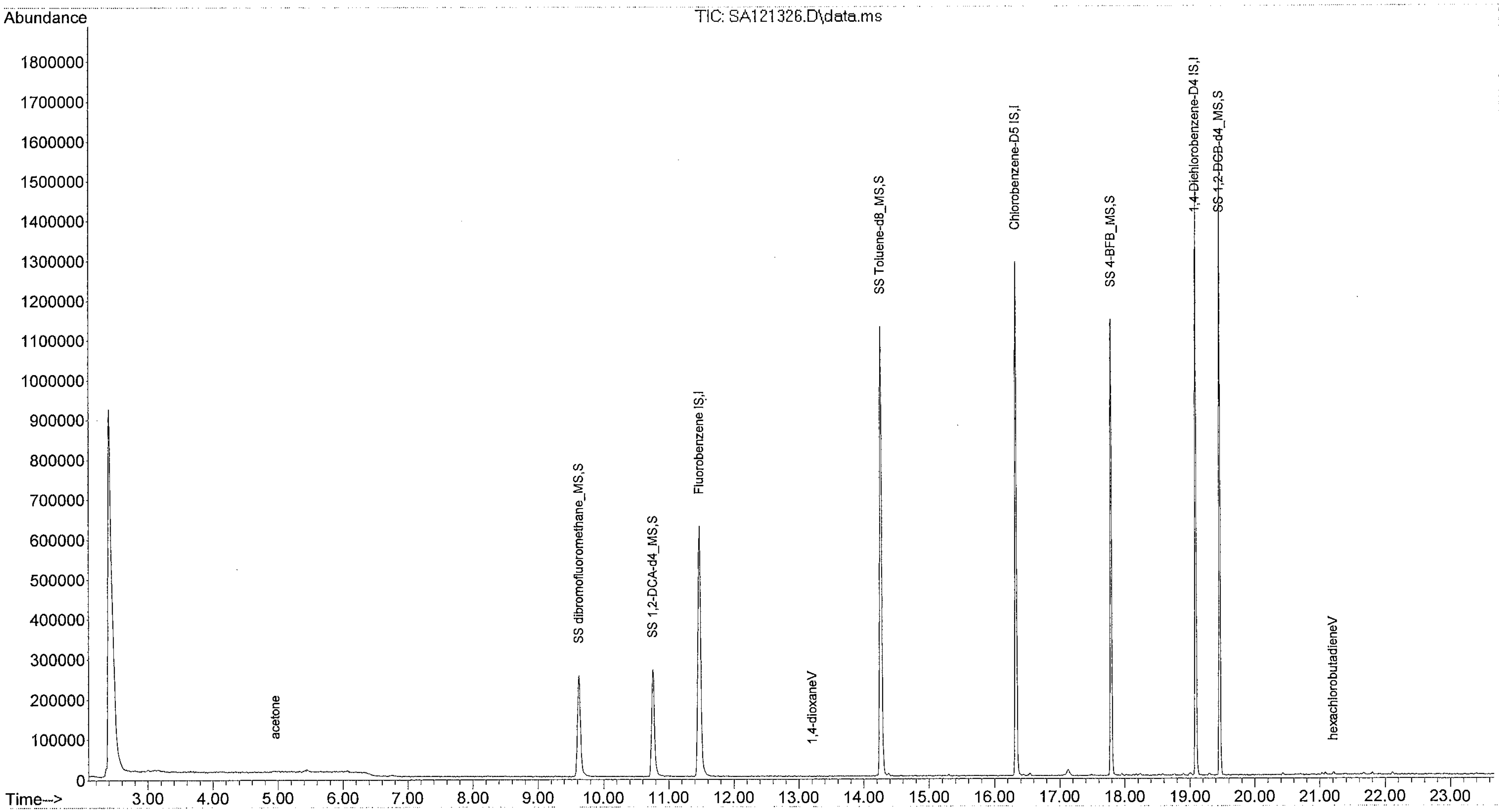
(#) = qualifier out of range (m) = manual integration (+) = signals summed

8/ 12/14/16

Quantitation Report (Not Reviewed)


```
Sample     : 163786.04
Misc       : X1; 5mL;
Data File  : SA121326.D
Data Path  : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On     : 13 Dec 2016  22:52
Operator   :
ALS Vial   : 26   Sample Multiplier: 1

Quant Time: Dec 14 11:14:25 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration
```



Quantitation Report (Not Reviewed)

Sample : 163786.05
Misc : X1; 5mL;
Data File : SA121327.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 13 Dec 2016 23:28
Operator :
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Dec 14 11:14:30 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

B 12/14/16

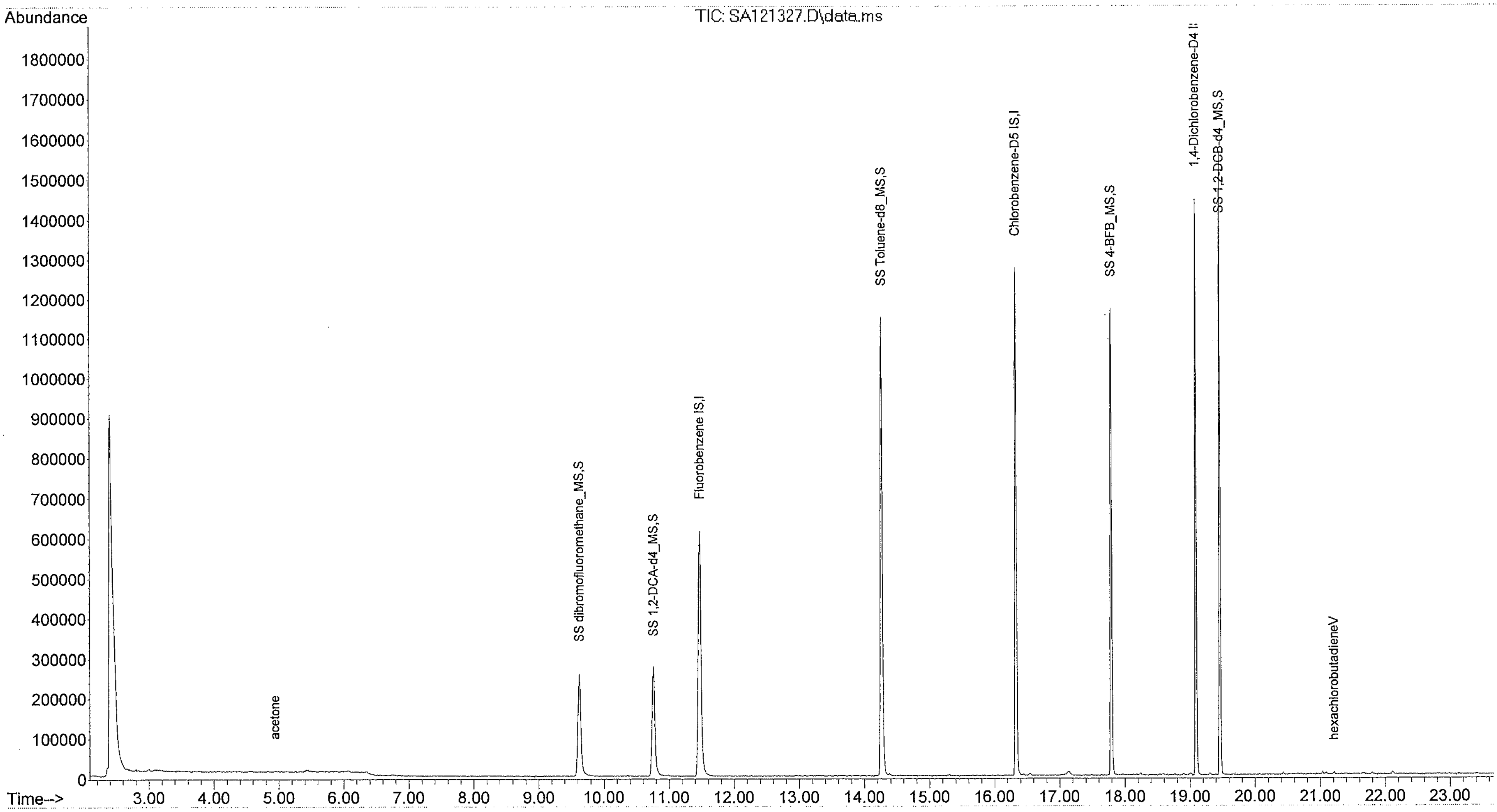
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.474	96	869225	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	683010	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	327839	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.625	111	252311	10.21 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	102.10%	
35) SS 1,2-DCA-d4_MS	10.762	65	312701	10.52 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	105.20%	
48) SS Toluene-d8_MS	14.267	98	881721	9.96 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	99.60%	
65) SS 4-BFB_MS	17.795	95	345290	10.02 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	100.20%	
83) SS 1,2-DCB-d4_MS	19.462	152	325457	10.20 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	102.00%	
90) SS 2,5-DBT_MS	22.905	250	466	0.07 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery =	0.18%#	
Target Compounds					Qvalue
11) acetone	4.940	43	2226	0.23 ug/L #	50
87) hexachlorobutadieneV	21.208	225	1015	0.10 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)


```
Sample      : 163786.05
Misc        : X1; 5mL;
Data File   : SA121327.D
Data Path   : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On      : 13 Dec 2016  23:28
Operator    :
ALS Vial    : 27   Sample Multiplier: 1

Quant Time: Dec 14 11:14:30 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration
```



Quantitation Report (Not Reviewed)

Sample : 163786.06
Misc : X1; 5mL;
Data File : SA121328.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 14 Dec 2016 00:03
Operator :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Dec 14 11:14:34 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.474	96	878199	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	682432	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	327986	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.625	111	253930	10.17 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	101.70%	
35) SS 1,2-DCA-d4_MS	10.756	65	311525	10.38 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	103.80%	
48) SS Toluene-d8_MS	14.261	98	893535	10.10 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	101.00%	
65) SS 4-BFB_MS	17.795	95	340860	9.90 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	99.00%	
83) SS 1,2-DCB-d4_MS	19.462	152	325294	10.19 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	101.90%	
90) SS 2,5-DBT_MS	22.899	250	455	0.07 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery =	0.18%#	
Target Compounds					Qvalue
8) diethyl ether	4.612	59	6394	0.39 ug/L #	76
11) acetone	4.947	43	1694	0.17 ug/L #	88
18) Methyl-t-butyl ether(M...	6.388	73	4503	0.12 ug/L #	89
23) 1,1-dichloroethane	7.508	63	3688	0.11 ug/L	92
29) Tetrahydrofuran(THF)	9.631	42	3042	0.51 ug/L #	66
41) 1,4-dioxaneV	13.086	88	39	0.17 ug/L #	1
87) hexachlorobutadieneV	21.208	225	1046	0.11 ug/L	91

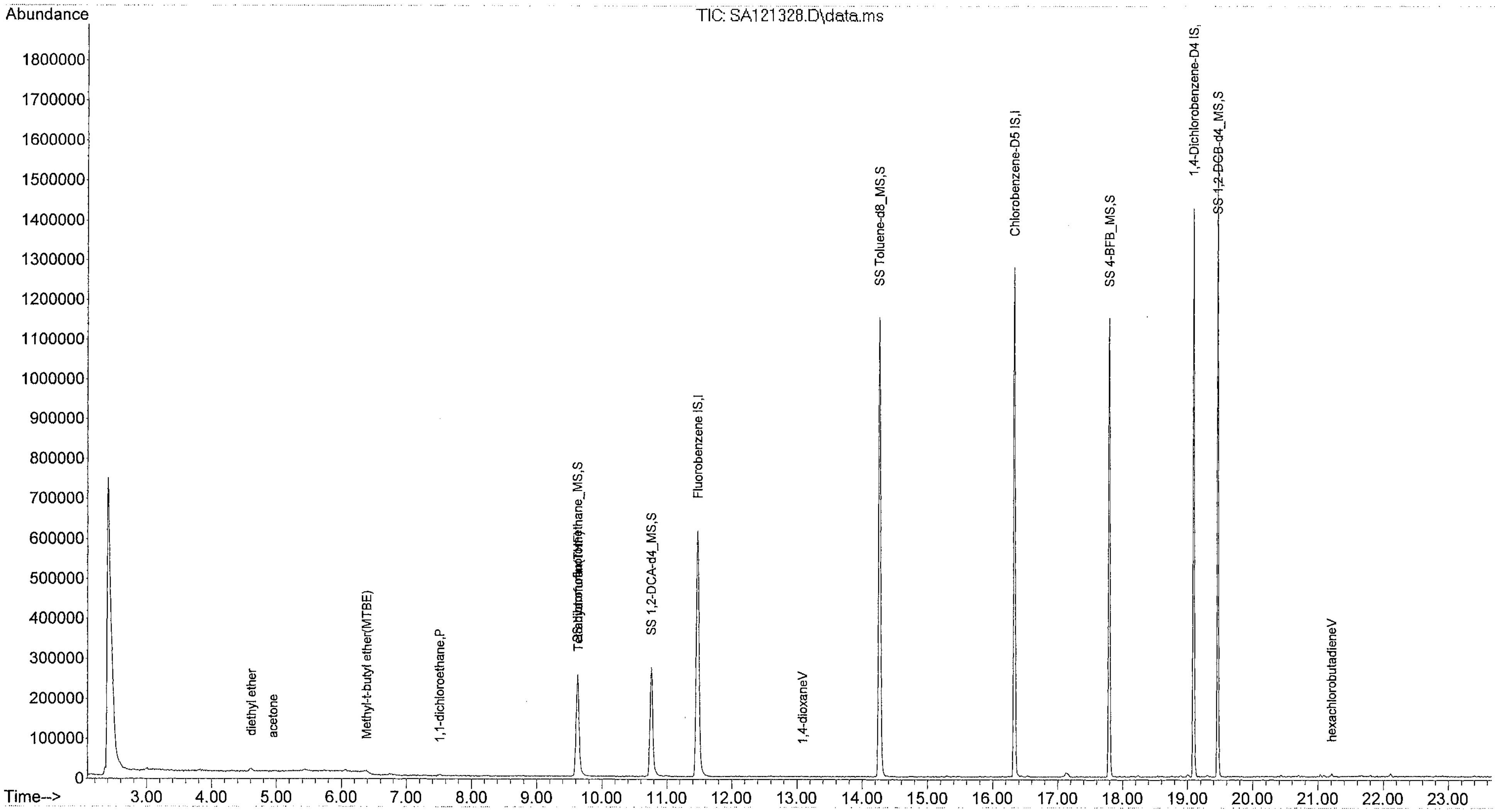
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Bw 12/14/16

Quantitation Report (Not Reviewed)

Sample : 163786.06
Misc : X1; 5mL;
Data File : SA121328.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 14 Dec 2016 00:03
Operator :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Dec 14 11:14:34 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Sample : 163786.07
Misc : X1; 5mL;
Data File : SA121329.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 14 Dec 2016 00:38
Operator :
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Dec 14 11:14:39 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

B 12/14/16

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.468	96	867555	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	682837	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	337282	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.625	111	254633	10.32 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	103.20%	
35) SS 1,2-DCA-d4_MS	10.762	65	308968	10.42 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	104.20%	
48) SS Toluene-d8_MS	14.260	98	878820	9.93 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	99.30%	
65) SS 4-BFB_MS	17.795	95	342026	9.92 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	99.20%	
83) SS 1,2-DCB-d4_MS	19.462	152	328416	10.00 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	100.00%	
90) SS 2,5-DBT_MS	22.911	250	291	0.04 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery =	0.10%#	
Target Compounds					Qvalue
11) acetone	4.953	43	5473	0.56 ug/L #	78
41) 1,4-dioxaneV	13.232	88	43	0.19 ug/L #	1

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)


```
Sample     : 163786.07
Misc       : X1; 5mL;
Data File  : SA121329.D
Data Path  : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On     : 14 Dec 2016  00:38
Operator   :
ALS Vial   : 29   Sample Multiplier: 1

Quant Time: Dec 14 11:14:39 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration
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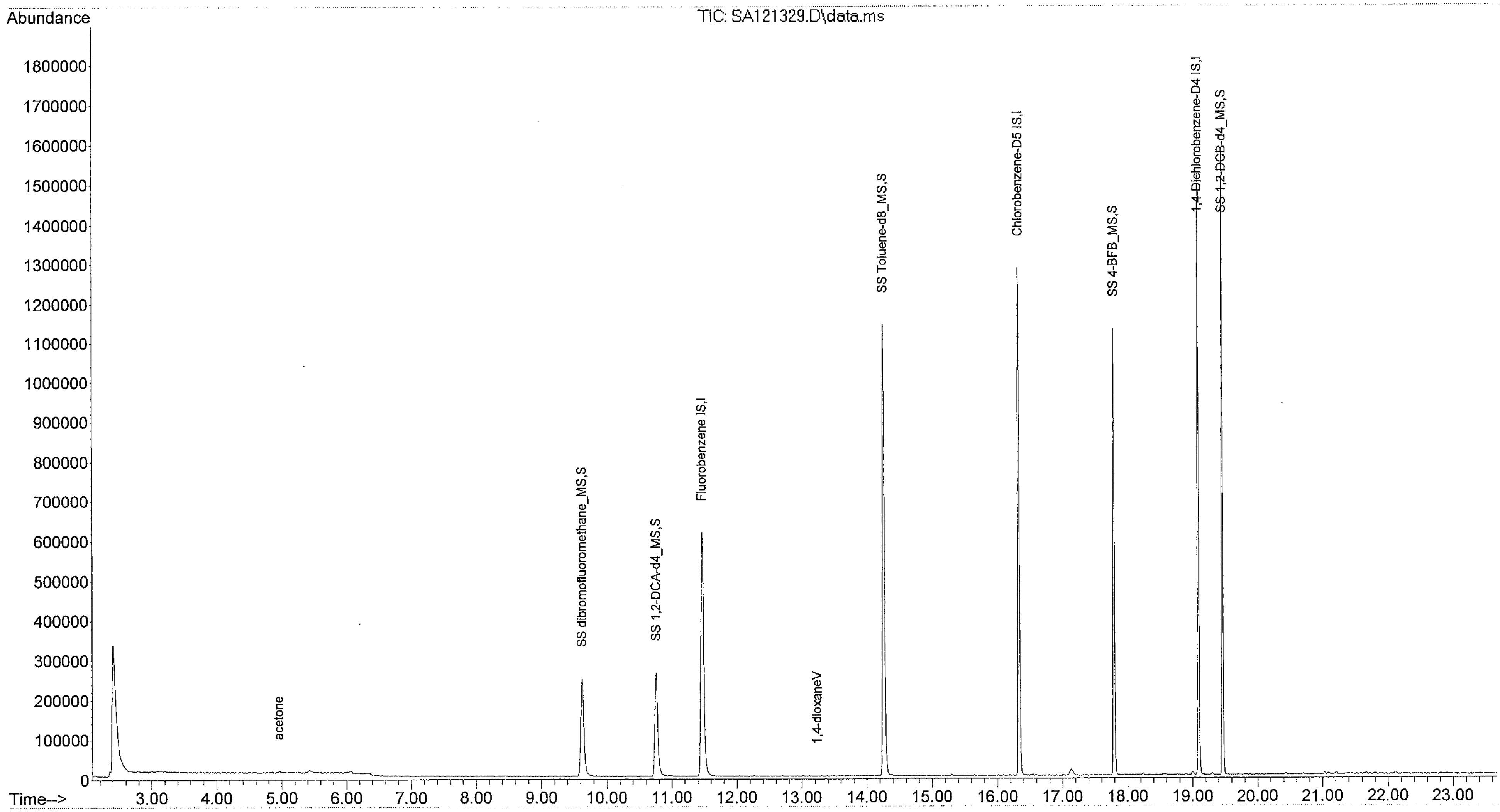


Quantitation Report (Not Reviewed)

```
Sample      : MSpk
Misc        : X1; 5mL; p=163786.03
Data File : SA121331.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On      : 14 Dec 2016   1:49
Operator    :
ALS Vial    : 31   Sample Multiplier: 1

Quant Time: Dec 14 11:14:49 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

        Compound                       R.T. QIon  Response  Conc Units Dev(Min)
-------------------------------------------------------------------------------
 Internal Standards
   1) Fluorobenzene IS              11.474   96    882134    10.00 ug/L     0.00
  47) Chlorobenzene-D5 IS           16.329  117    671559    10.00 ug/L     0.00
  66) 1,4-Dichlorobenzene-D4 IS     19.091  152    340407    10.00 ug/L     0.00

 System Monitoring Compounds
  31) SS dibromofluoromethan...      9.625  111    250692     9.99 ug/L    0.00
   Spiked Amount      10.000   Range  70 - 130    Recovery   =    99.90%
  35) SS 1,2-DCA-d4_MS              10.756   65    301495    10.00 ug/L    0.00
   Spiked Amount      10.000   Range  70 - 130    Recovery   =   100.00%
  48) SS Toluene-d8_MS              14.261   98    887048    10.19 ug/L    0.00
   Spiked Amount      10.000   Range  70 - 130    Recovery   =   101.90%
  65) SS 4-BFB_MS                   17.789   95    347257    10.25 ug/L    0.00
   Spiked Amount      10.000   Range  70 - 130    Recovery   =   102.50%
  83) SS 1,2-DCB-d4_MS              19.462  152    331204     9.99 ug/L    0.00
   Spiked Amount      10.000   Range  70 - 130    Recovery   =    99.90%
  90) SS 2,5-DBT_MS                 22.899  250       569     0.08 ug/L    0.00
   Spiked Amount      40.000   Range  70 - 130    Recovery   =     0.20%#

 Target Compounds                                                   Qvalue
   2) dichlorodifluoromethane        2.617   85    297940    14.12 ug/L      95
   3) chloromethane                  2.933   50    372400    17.29 ug/L      97
   4) vinyl chloride                 3.067   62    294232    19.88 ug/L      94
   5) bromomethane                   3.657   94    123832    18.15 ug/L      82
   6) chloroethane                   3.766   64    210749    20.39 ug/L      96
   7) trichlorofluoromethane         4.137  101    542117    19.04 ug/L      98
   8) diethyl ether                  4.600   59    254732    15.33 ug/L      99
   9) 1,1,2-Trichlorotrifluo...      4.825  101    264560    22.11 ug/L      99
  10) acrolein                       4.831   56     32398    12.08 ug/L      97
  11) acetone                        4.953   43    121544    12.19 ug/L      97
  12) 1,1-dichloroethene             5.147   96    270481    19.16 ug/L      97
  13) tert-Butyl Alcohol(TBA)        5.354   59    103321    ~~58.45~~ ug/L #    86 79.15 tai)
  14) iodomethane                    5.725  142     55336     5.31 ug/L      94
  15) methylene chloride             6.060   84    318148    19.67 ug/L      97
  16) carbon disulfide               6.066   76    963228    17.59 ug/L     100
  17) acrylonitrile                  6.315   53    140794    18.92 ug/L      95
  18) Methyl-t-butyl ether(M...      6.364   73    636531    16.99 ug/L #    96
  19) trans-1,2-dichloroethene       6.632   96    351187    18.96 ug/L      97
  21) Isopropyl ether(DIPE)          7.301   45   1280140    19.93 ug/L      99
  22) vinyl acetate                  7.532   43    356285     9.13 ug/L      99
  23) 1,1-dichloroethane             7.502   63    659776    19.59 ug/L      99
  24) Ethyl-t-butyl ether(ETBE)      8.159   59    388421    11.97 ug/L      98
  25) 2,2-dichloropropane            8.694   77    127667     7.89 ug/L      97
  26) cis-1,2-dichloroethene         8.797   96    385702    19.03 ug/L      96
  27) 2-butanone(MEK)                8.439   43    181567    14.79 ug/L      99
  28) bromochloromethane             9.503  128    191938    19.40 ug/L      98
  29) Tetrahydrofuran(THF)           9.607   42    128259    21.45 ug/L      96
  30) chloroform                     9.144   83    682113    19.94 ug/L      99
  32) 1,1,1-trichloroethane         10.020   97    388365    15.17 ug/L      98
  33) carbon tetrachloride          10.580  117    310249    14.77 ug/L      98
  34) 1,1-dichloropropene           10.379   75    508345    20.19 ug/L     100
  36) tert-amyl methyl ether...     10.677   73    494898    11.76 ug/L #    77
  37) benzene                       10.988   78   1401557    19.64 ug/L      99
  38) 1,2-dichloroethane            10.975   62    558299    19.09 ug/L      99
  39) trichloroethene               12.265   95    372548    19.43 ug/L      99
  40) 1,2-dichloropropane           12.600   63    368384    19.40 ug/L      99
  41) 1,4-dioxaneV                  13.080   88      5074    21.76 ug/L #    76
  42) dibromomethane                13.092   93    243182    19.19 ug/L      99
  43) bromodichloromethane          13.007   83    464878    20.97 ug/L     100
```

B— 12/14/16

Quantitation Report (Not Reviewed)

Sample : MSpk
Misc : X1; 5mL; p=163786.03
Data File : SA121331.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 14 Dec 2016 1:49
Operator :
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Dec 14 11:14:49 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

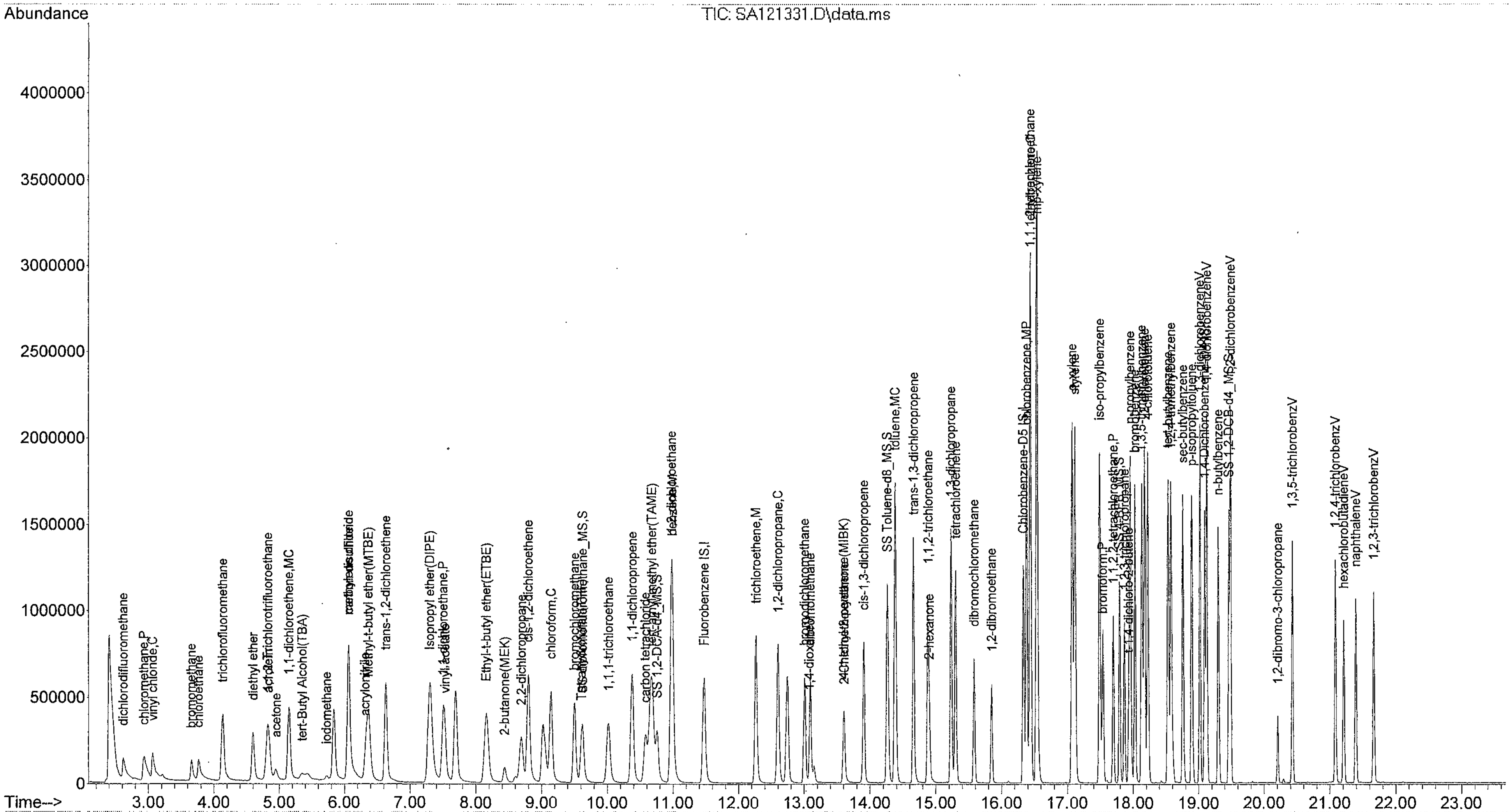
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 2-Chloroethoxyethene	13.610	63	699	0.14 ug/L #	1
45) 4-methyl-2-pentanone(M...	13.603	58	129892	16.96 ug/L	98
46) cis-1,3-dichloropropene	13.908	75	433951	17.17 ug/L	99
49) toluene	14.382	91	1437683	20.54 ug/L	99
50) trans-1,3-dichloropropene	14.662	75	335096	14.07 ug/L	99
51) 1,1,2-trichloroethane	14.881	83	285465	20.16 ug/L	99
52) 2-hexanone	14.899	43	262215	17.25 ug/L	99
53) tetrachloroethene	15.301	166	379846	19.93 ug/L	99
54) 1,3-dichloropropane	15.228	76	551531	20.15 ug/L	99
55) dibromochloromethane	15.581	129	354733	19.26 ug/L	97
56) 1,2-dibromoethane	15.848	107	342390	19.06 ug/L	100
57) chlorobenzene	16.378	112	956817	20.45 ug/L	100
58) 1,1,1,2-tetrachloroethane	16.432	131	283626	18.88 ug/L	99
59) ethylbenzene	16.438	91	1531456	21.08 ug/L	100
60) mp-xylene	16.536	106	1169067	43.97 ug/L	99
61) o-xylene	17.071	106	594800	20.47 ug/L	98
62) styrene	17.114	104	1032216	21.22 ug/L	99
63) bromoform	17.533	173	236460	17.52 ug/L	96
64) iso-propylbenzene	17.491	105	1298077	21.94 ug/L	100
67) bromobenzene	18.026	156	442395	19.53 ug/L	99
68) 1,1,2,2-tetrachloroethane	17.698	83	427881	19.60 ug/L	99
69) 1,2,3-trichloropropane	17.868	110	123975	18.61 ug/L	100
70) t-1,4-dichloro-2-butene	17.929	53	108402	30.29 ug/L #	86
71) n-propylbenzene	17.953	91	1504599	21.78 ug/L	99
72) 2-chlorotoluene	18.172	91	992599	20.64 ug/L	99
73) 4-chlorotoluene	18.221	91	1046730	21.20 ug/L	100
74) 1,3,5-trimethylbenzene	18.130	105	1024490	20.62 ug/L	100
75) tert-butylbenzene	18.531	119	825137	20.56 ug/L	100
76) 1,2,4-trimethylbenzene	18.574	105	1096709	21.21 ug/L	99
77) sec-butylbenzene	18.756	105	1117500	20.67 ug/L	99
78) 1,3-dichlorobenzeneV	19.018	146	694796	20.63 ug/L	99
79) p-isopropyltoluene	18.896	119	964674	20.85 ug/L	100
80) 1,4-dichlorobenzeneV	19.121	146	706818	20.68 ug/L	100
81) 1,2-dichlorobenzeneV	19.486	146	688244	20.95 ug/L	100
82) n-butylbenzene	19.298	91	792746	19.84 ug/L	99
84) 1,2-dibromo-3-chloropr...	20.204	75	69833	14.99 ug/L	98
85) 1,3,5-trichlorobenzV	20.429	180	397336	18.06 ug/L	100
86) 1,2,4-trichlorobenzV	21.080	180	375144	18.50 ug/L	99
87) hexachlorobutadieneV	21.208	225	177474	17.62 ug/L	99
88) naphthaleneV	21.390	128	800613	18.68 ug/L	99
89) 1,2,3-trichlorobenzV	21.664	180	348007	18.85 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

```
Sample       : MSpk
Misc         : X1; 5mL; p=163786.03
Data File    : SA121331.D
Data Path    : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On       : 14 Dec 2016   1:49
Operator     :
ALS Vial     : 31   Sample Multiplier: 1

Quant Time: Dec 14 11:14:49 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title  : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration
```



Sample : MSDu
Misc : X1; 5mL; p=163786.03
Data File : SA121332.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 14 Dec 2016 2:24
Operator :
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Dec 14 11:14:54 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

B~ 12/14/16

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	11.474	96	884708	10.00 ug/L	0.00
47) Chlorobenzene-D5 IS	16.329	117	691142	10.00 ug/L	0.00
66) 1,4-Dichlorobenzene-D4 IS	19.091	152	336357	10.00 ug/L	0.00
System Monitoring Compounds					
31) SS dibromofluoromethan...	9.625	111	254277	10.11 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 101.10%	
35) SS 1,2-DCA-d4_MS	10.756	65	301581	9.97 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 99.70%	
48) SS Toluene-d8_MS	14.266	98	891477	9.95 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 99.50%	
65) SS 4-BFB_MS	17.789	95	343909	9.86 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 98.60%	
83) SS 1,2-DCB-d4_MS	19.462	152	328924	10.04 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 100.40%	
90) SS 2,5-DBT_MS	22.905	250	253	0.04 ug/L	0.00
Spiked Amount 40.000	Range 70 - 130		Recovery	= 0.10%#	
Target Compounds					Qvalue
2) dichlorodifluoromethane	2.623	85	288871	13.65 ug/L	97
3) chloromethane	2.933	50	377566	17.48 ug/L	99
4) vinyl chloride	3.067	62	285711	19.22 ug/L	100
5) bromomethane	3.663	94	138720	20.24 ug/L	80
6) chloroethane	3.772	64	212133	20.47 ug/L	96
7) trichlorofluoromethane	4.137	101	525940	18.42 ug/L	97
8) diethyl ether	4.600	59	247812	14.87 ug/L	96
9) 1,1,2-Trichlorotrifluo...	4.831	101	269178	22.43 ug/L	99
10) acrolein	4.831	56	32231	11.98 ug/L	99
11) acetone	4.946	43	115568	11.55 ug/L	97
12) 1,1-dichloroethene	5.147	96	278245	19.65 ug/L	97
13) tert-Butyl Alcohol(TBA)	5.342	59	130135	73.41 ug/L #	76
14) iodomethane	5.725	142	62082	5.94 ug/L #	86
15) methylene chloride	6.060	84	313284	19.32 ug/L	97
16) carbon disulfide	6.066	76	981178	17.86 ug/L	100
17) acrylonitrile	6.321	53	136063	18.23 ug/L	92
18) Methyl-t-butyl ether(M...	6.364	73	685927	18.26 ug/L	98
19) trans-1,2-dichloroethene	6.632	96	355707	19.14 ug/L	98
21) Isopropyl ether(DIPE)	7.301	45	1268966	19.70 ug/L	99
22) vinyl acetate	7.532	43	413193	10.56 ug/L	100
23) 1,1-dichloroethane	7.508	63	663925	19.66 ug/L	100
24) Ethyl-t-butyl ether(ETBE)	8.159	59	458018	14.04 ug/L	98
25) 2,2-dichloropropane	8.700	77	151623	9.32 ug/L	99
26) cis-1,2-dichloroethene	8.797	96	394050	19.39 ug/L	97
27) 2-butanone(MEK)	8.432	43	176354	14.32 ug/L	100
28) bromochloromethane	9.503	128	188553	19.00 ug/L	96
29) Tetrahydrofuran(THF)	9.606	42	125877	20.99 ug/L	98
30) chloroform	9.144	83	680815	19.84 ug/L	100
32) 1,1,1-trichloroethane	10.020	97	427310	16.64 ug/L	98
33) carbon tetrachloride	10.586	117	337958	16.04 ug/L	99
34) 1,1-dichloropropene	10.379	75	502825	19.91 ug/L	99
36) tert-amyl methyl ether...	10.677	73	550167	13.03 ug/L #	89
37) benzene	10.987	78	1406174	19.65 ug/L	100
38) 1,2-dichloroethane	10.975	62	549450	18.73 ug/L	99
39) trichloroethene	12.265	95	377113	19.61 ug/L	99
40) 1,2-dichloropropane	12.600	63	377401	19.81 ug/L	99
41) 1,4-dioxaneV	13.086	88	5189	22.19 ug/L #	68
42) dibromomethane	13.092	93	244136	19.21 ug/L	99
43) bromodichloromethane	13.007	83	478148	21.51 ug/L	99

Quantitation Report (Not Reviewed)

Sample : MSDu
Misc : X1; 5mL; p=163786.03
Data File : SA121332.D
Data Path : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On : 14 Dec 2016 2:24
Operator :
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Dec 14 11:14:54 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 2-Chloroethoxyethene	13.609	63	728	0.15 ug/L #	1
45) 4-methyl-2-pentanone(M...	13.603	58	130118	16.94 ug/L	96
46) cis-1,3-dichloropropene	13.908	75	454073	17.91 ug/L	99
49) toluene	14.382	91	1460999	20.28 ug/L	99
50) trans-1,3-dichloropropene	14.662	75	359395	14.66 ug/L	98
51) 1,1,2-trichloroethane	14.881	83	278335	19.10 ug/L	99
52) 2-hexanone	14.899	43	256284	16.38 ug/L	99
53) tetrachloroethene	15.301	166	386301	19.70 ug/L	99
54) 1,3-dichloropropane	15.228	76	552249	19.61 ug/L	99
55) dibromochloromethane	15.581	129	365522	19.29 ug/L	99
56) 1,2-dibromoethane	15.848	107	341380	18.46 ug/L	99
57) chlorobenzene	16.377	112	958352	19.90 ug/L	98
58) 1,1,1,2-tetrachloroethane	16.432	131	292910	18.95 ug/L	100
59) ethylbenzene	16.438	91	1536739	20.53 ug/L	99
60) mp-xylene	16.536	106	1168647	42.68 ug/L	99
61) o-xylene	17.071	106	596355	19.94 ug/L	99
62) styrene	17.114	104	1032901	20.63 ug/L	99
63) bromoform	17.533	173	239876	17.27 ug/L	95
64) iso-propylbenzene	17.491	105	1313934	21.57 ug/L	99
67) bromobenzene	18.026	156	439863	19.66 ug/L	98
68) 1,1,2,2-tetrachloroethane	17.698	83	423157	19.62 ug/L	100
69) 1,2,3-trichloropropane	17.868	110	122131	18.56 ug/L	99
70) t-1,4-dichloro-2-butene	17.935	53	108003	30.54 ug/L #	85
71) n-propylbenzene	17.953	91	1515965	22.22 ug/L	99
72) 2-chlorotoluene	18.172	91	995548	20.96 ug/L	100
73) 4-chlorotoluene	18.221	91	1045714	21.44 ug/L	99
74) 1,3,5-trimethylbenzene	18.130	105	1038933	21.16 ug/L	99
75) tert-butylbenzene	18.531	119	831678	20.97 ug/L	100
76) 1,2,4-trimethylbenzene	18.574	105	1074636	21.02 ug/L	100
77) sec-butylbenzene	18.756	105	1129015	21.15 ug/L	100
78) 1,3-dichlorobenzeneV	19.018	146	696201	20.93 ug/L	99
79) p-isopropyltoluene	18.896	119	966287	21.13 ug/L	100
80) 1,4-dichlorobenzeneV	19.121	146	708565	20.99 ug/L	99
81) 1,2-dichlorobenzeneV	19.486	146	675097	20.79 ug/L	99
82) n-butylbenzene	19.298	91	801591	20.31 ug/L	99
84) 1,2-dibromo-3-chloropr...	20.204	75	70740	15.36 ug/L	97
85) 1,3,5-trichlorobenzV	20.429	180	400493	18.42 ug/L	100
86) 1,2,4-trichlorobenzV	21.086	180	381830	19.06 ug/L	99
87) hexachlorobutadieneV	21.208	225	183828	18.47 ug/L	100
88) naphthaleneV	21.390	128	822659	19.42 ug/L	99
89) 1,2,3-trichlorobenzV	21.664	180	345497	18.94 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

```
Sample      : MSDu
Misc        : X1; 5mL; p=163786.03
Data File   : SA121332.D
Data Path   : C:\msdchem\1\data\2016\DEC16\DEC1316\
Acq On      : 14 Dec 2016   2:24
Operator    :
ALS Vial    : 32   Sample Multiplier: 1

Quant Time: Dec 14 11:14:54 2016
Quant Method : C:\msdchem\1\methods\2015\4VID1213.M
Quant Title   : 8260/624
QLast Update : Wed Dec 14 07:58:38 2016
Response via : Initial Calibration
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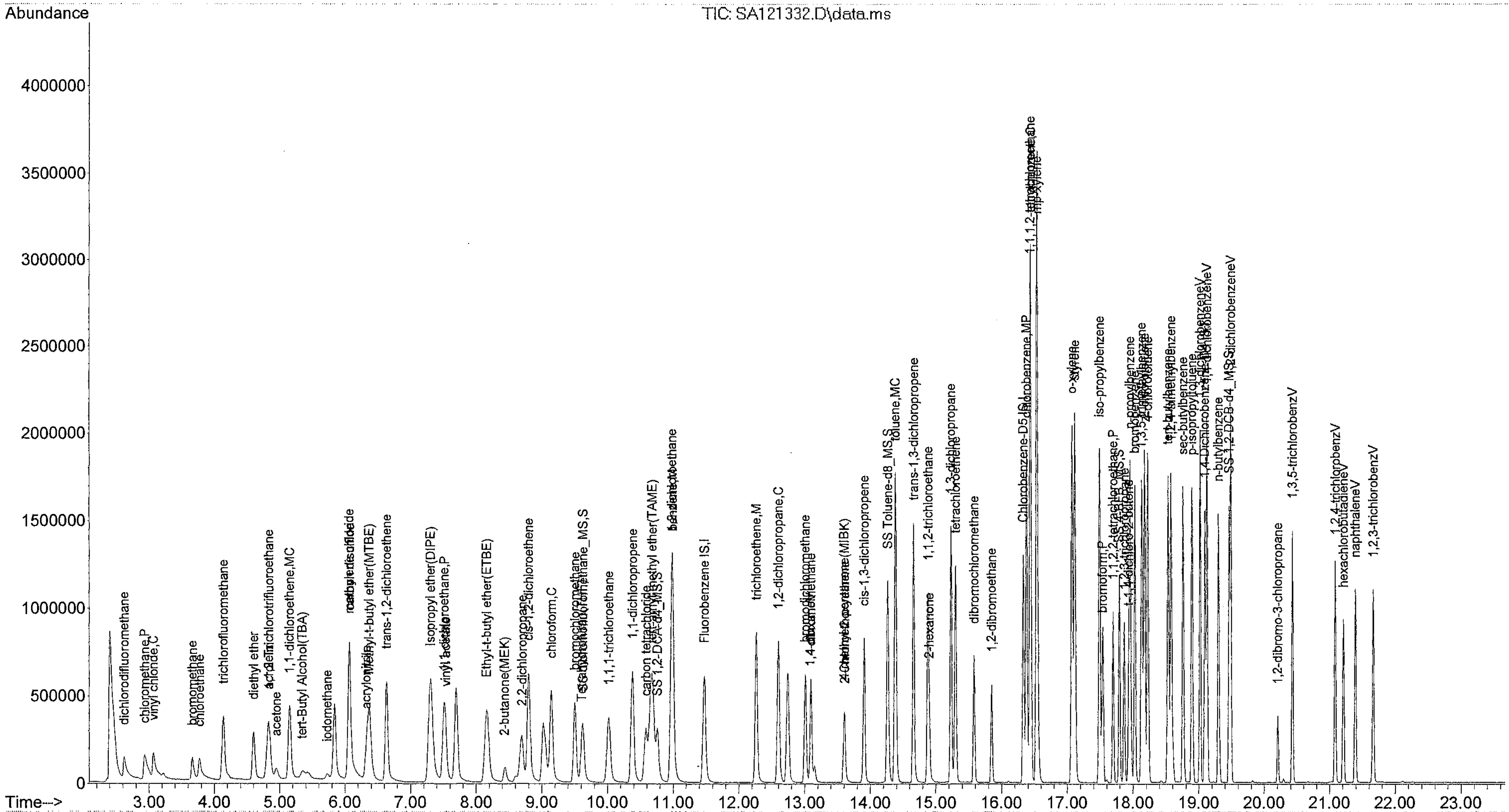


4VID1213.M Wed Dec 14 11:14:55 2016 Page: 3

1,4-Dioxane 8260B SIM

Initial Calibration

VOAMS6 Analysis Run Log

IS/SS ID= V- 4440
Standard ID= V- 4424
Gas Standard ID= V- NA
LCS/LCSD and/or MS/MSD Standard ID= V- 4425

Analyst: VG

Date: 6/23/16

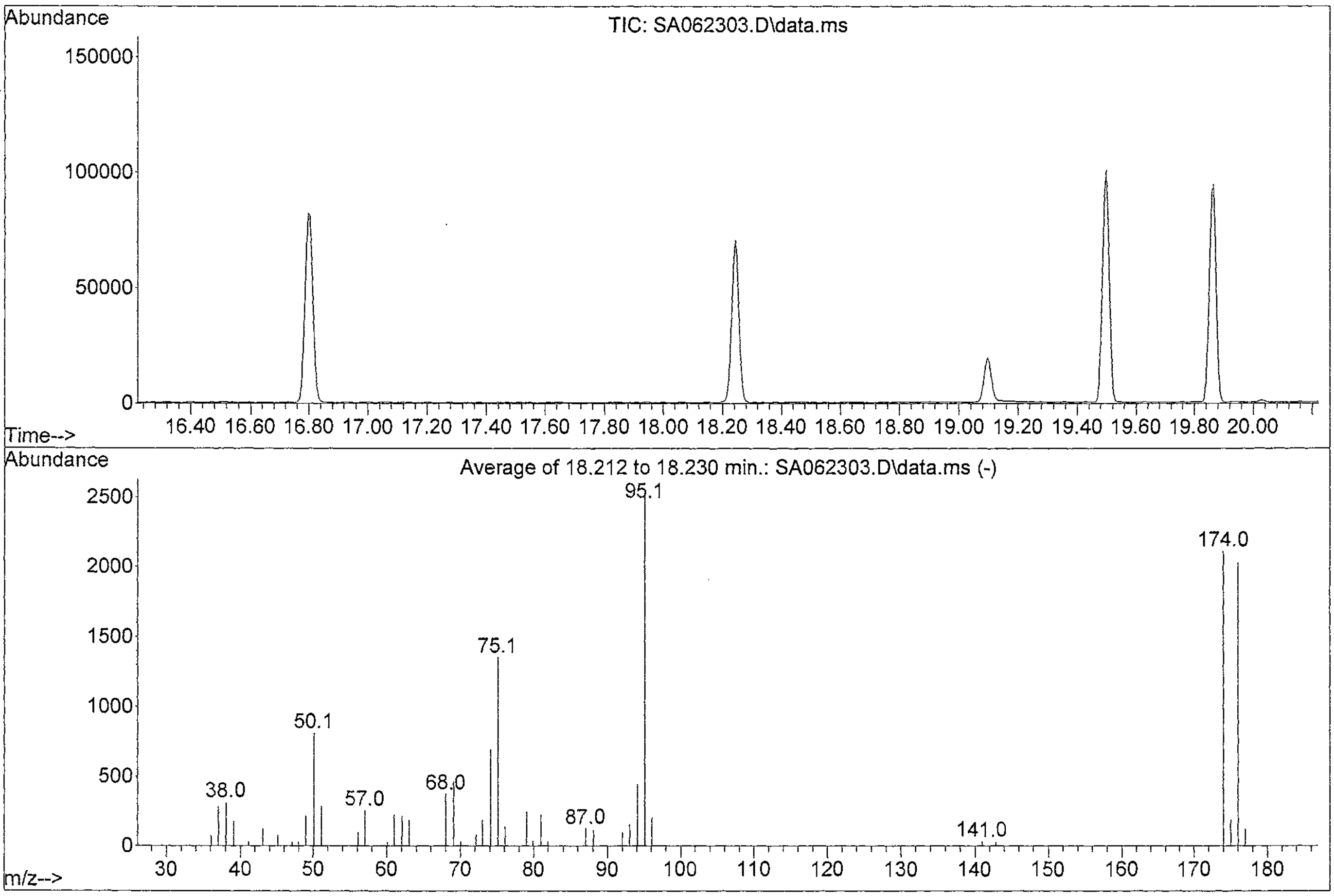
ALS	Data File	Sample Name	RR	AQ	SO	Dilution	Aq Meth	An Meth	Comments	pH<2	A
1	SA06B01	BFB		✓		X1	VOCMS		Changed sparge tube		
2	2	STD5		✓			~~VOCMS~~	6SIM0531	Aq Meth = VOCMSSIM14D		
~~3~~	~~3~~	~~LCS5~~		~~✓~~			~~VOCMS~~				
~~4~~	~~4~~	~~LCSD5~~		~~✓~~			~~VOCMS~~				
~~5~~	~~5~~	~~Blank~~		~~✓~~			~~VOCMS~~				
~~6~~	~~6~~	~~Blank~~		~~✓~~			~~VOCMS~~				
1	SA06B03	BFB		✓			~~VOCMS~~		18.212 - 18.230		
2	4	STD0.25		✓			~~VOCMS~~		Aq Meth = VOCMSSIM14B		
3	5	STD0.5		✓			~~VOCMS~~				
4	6	1		✓			~~VOCMS~~				
5	7	2		✓			~~VOCMS~~		NEW ICAL		
6	8	5		✓			~~VOCMS~~				
7	9	10		✓			~~VOCMS~~		6SIM0623		
8	10	Blank		✓			~~VOCMS~~				
9	11	STD20		✓			~~VOCMS~~				
10	12	Blank		✓			~~VOCMS~~				
11	13	BFB		✓			~~VOCMS~~		Aq Meth = VOCMS		
12	14	STD5		✓			~~VOCMS~~		Aq Meth = VOCMSSIM14D		
13	15	LCS5		✓			~~VOCMS~~				
14	16	LCSD5		✓			~~VOCMS~~				
15	17	Blank		✓			~~VOCMS~~				
16	18	Blank		✓			~~VOCMS~~				
17	19	157286.13	✓	✓		X1	~~VOCMS~~				
18	20	157310.16		✓			~~VOCMS~~				
19	21	20		✓			~~VOCMS~~				
20	22	38		✓			~~VOCMS~~				
21	23	32		✓			~~VOCMS~~				
22	24	29		✓			~~VOCMS~~				
23	25	36		✓			~~VOCMS~~				
24	26	35		✓			~~VOCMS~~				
25	27	07		✓			~~VOCMS~~				
26	28	07		✓			~~VOCMS~~				
27	29	157430.06		✓			~~VOCMS~~				
28	30	157302.01	✓	✓			~~VOCMS~~				
29	31	04	✓	✓			~~VOCMS~~				
30	32	157430.01		✓			~~VOCMS~~				
31	33	02		✓			~~VOCMS~~				
32	34	03		✓			~~VOCMS~~				
33	35	04		✓			~~VOCMS~~				
34	36	07		✓			~~VOCMS~~				
35	37	STD0.25		✓			~~VOCMS~~				
							VOCMS				

Samples removed from autosampler, order and pH verified by 6/24/16

Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062303.D
Acq On : 23 Jun 2016 14:30
Operator : VG/BAM
Sample : BFB
Misc : X1;5mL
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Title :
Last Update : Fri Jun 24 07:44:43 2016



Spectrum Information: Average of 18.212 to 18.230 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	32.4	813	PASS
75	95	30	60	54.0	1354	PASS
95	95	100	100	100.0	2506	PASS
96	95	5	9	8.1	204	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	84.3	2112	PASS
175	174	5	9	8.8	185	PASS
176	174	95	101	96.1	2029	PASS
177	176	5	9	6.1	123	PASS

Response Factor Report VOAMS6

Method Path : C:\MassHunter\GCMS\1\methods\
Method File : 6SIM0623.M
Title :
Last Update : Fri Jun 24 07:44:43 2016
Response Via : Initial Calibration

Calibration Files
0.5 =SA062305.D 0.25=SA062304.D 1 =SA062306.D 2 =SA062307.D 5 =SA062308.D 10 =SA062309.D 20 =SA062311.D

		Compound	0.5	0.25	1	2	5	10	20	Avg	%RSD
1)	I	Fluorobenzene IS	ISTD								
2)		1,4-dioxaneV	0.034	0.036	0.030	0.028	0.026	0.029	0.026	0.030#	12.37
3)	S	SS Toluene-d8_MS	0.978	1.071	0.978	0.977	0.975	0.970	0.972	0.989	3.67
4)	S	SS 4-BFB_MS	0.341	0.357	0.342	0.342	0.343	0.340	0.344	0.344	1.69

(#) = Out of Range

Method Path : C:\MassHunter\GCMS\1\methods\
Method File : 6SIM0623.M
Title :
Last Update : Fri Jun 24 07:44:43 2016
Response Via : Initial Calibration

Total Cpnds : 4

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Fluorobenzene IS	-96	12.122	1.000	A	1	A	B
2		1,4-dioxaneV	-88	13.629	1.124	A	1	A	B
3	S	SS Toluene-d8_MS	-98	14.766	1.218	A	1	A	B
4	S	SS 4-BFB_MS	-95	18.243	1.505	A	1	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062304.D
Acq On : 23 Jun 2016 15:02
Operator : VG/BAM
Sample : STD0.25
Misc : X1;5mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 23 17:23:32 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Thu Jun 23 17:23:28 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	12.123	96	102082	10.00	ug/L	0.00
System Monitoring Compounds						
3) SS Toluene-d8_MS	14.772	98	109293	10.70	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	107.00%		
4) SS 4-BFB_MS	18.243	95	36447	10.34	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	103.40%		
Target Compounds						Qvalue
2] 1,4-dioxaneV	13.654	88	91m	0.34	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

```
Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062304.D
Acq On    : 23 Jun 2016  15:02
Operator  : VG/BAM
Sample    : STD0.25
Misc      : X1;5mL
ALS Vial  : 2   Sample Multiplier: 1

Quant Time: Jun 23 17:23:32 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title  :
QLast Update : Thu Jun 23 17:23:28 2016
Response via : Initial Calibration
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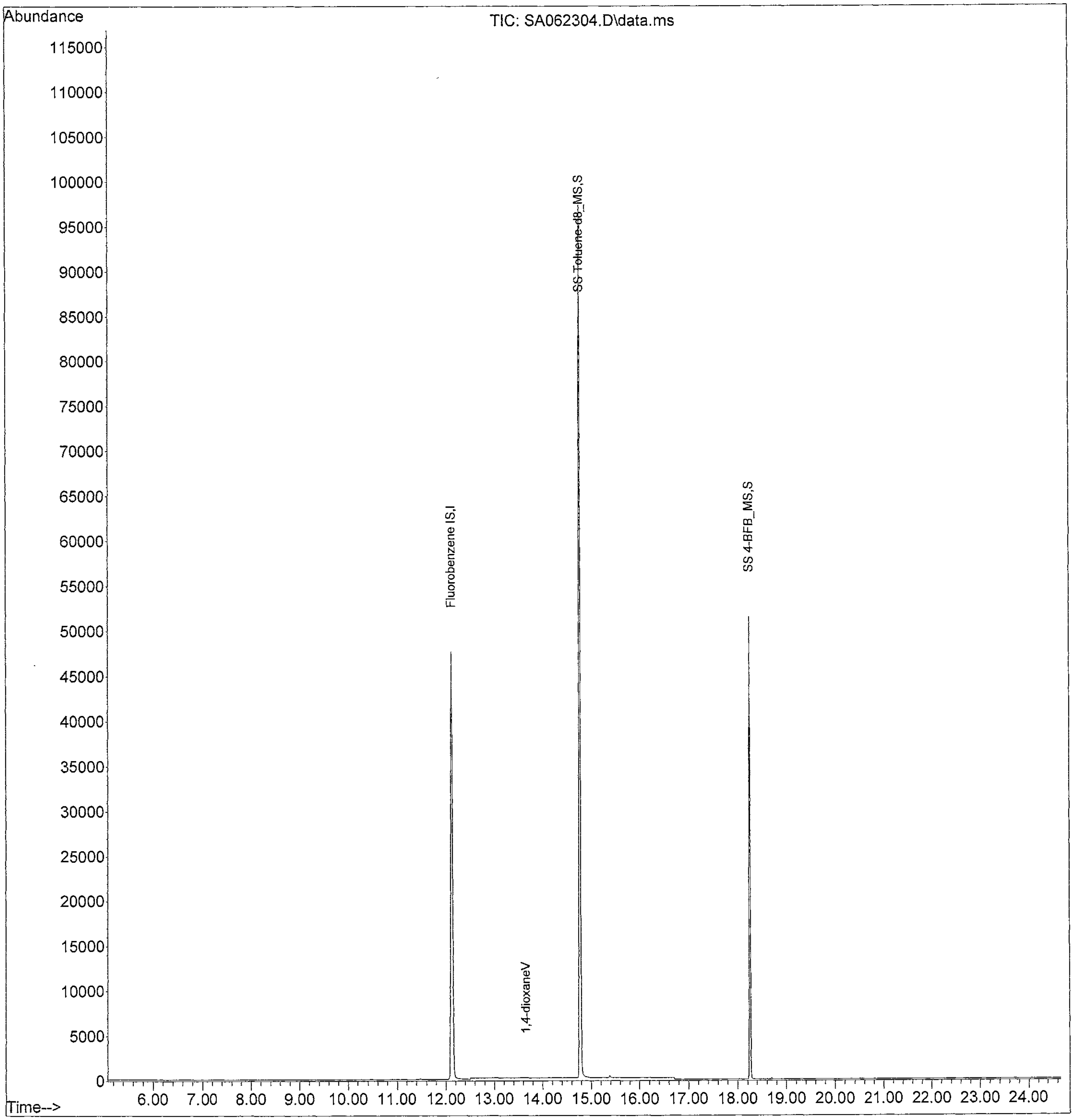


Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062305.D
Acq On : 23 Jun 2016 15:33
Operator : VG/BAM
Sample : STD0.5
Misc : X1;5mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 23 16:48:20 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Wed Jun 01 10:05:31 2016
Response via : Initial Calibration

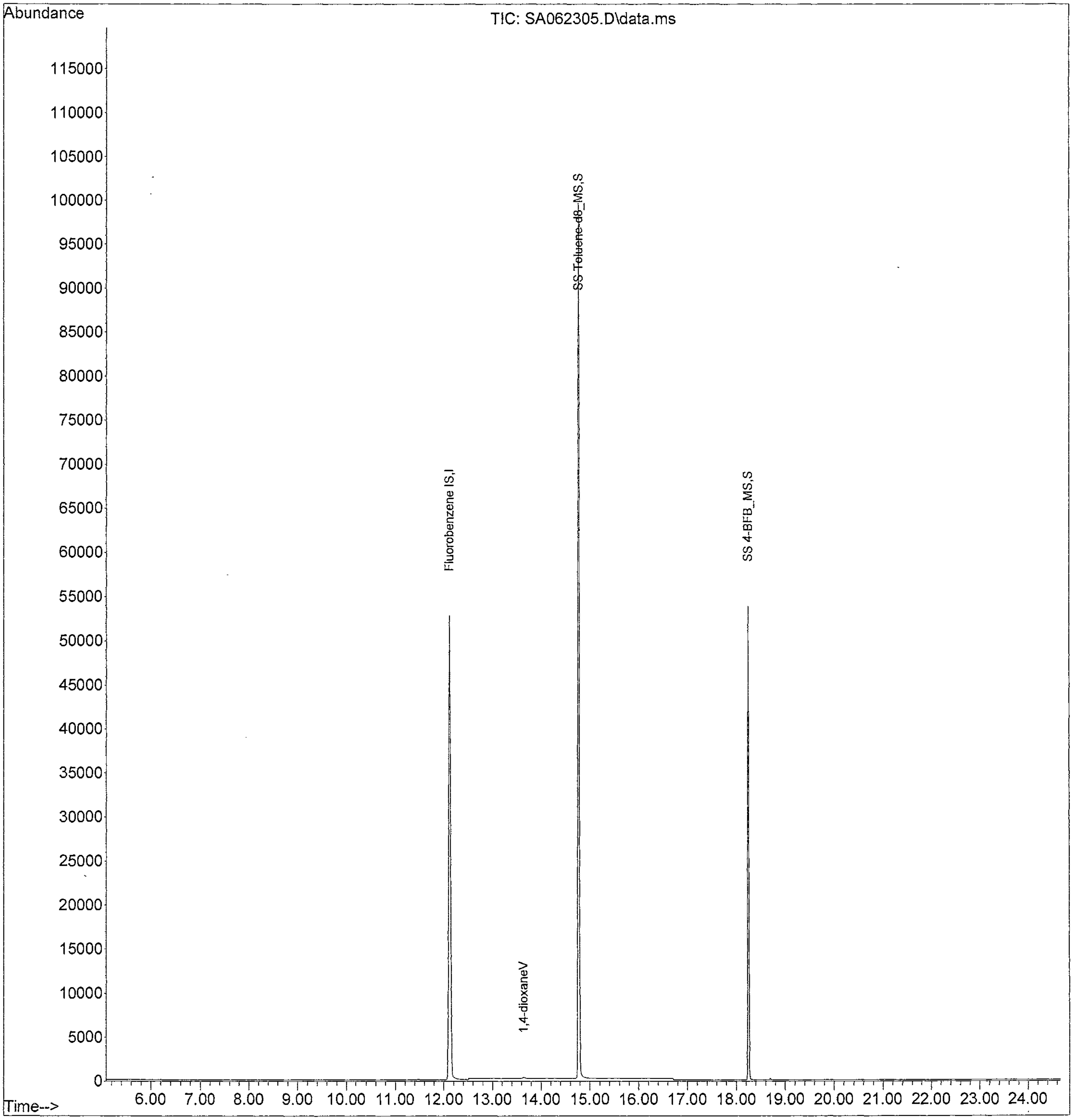
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	12.122	96	113401	10.00 ug/L	0.00
System Monitoring Compounds					
3) SS Toluene-d8_MS	14.766	98	110931	9.93 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.30%		
4) SS 4-BFB_MS	18.243	95	38657	10.43 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 104.30%		
Target Compounds					Qvalue
2] 1,4-dioxaneV	13.641	88	193	0.45 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062305.D
Acq On : 23 Jun 2016 15:33
Operator : VG/BAM
Sample : STD0.5
Misc : X1;5mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 23 16:48:20 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Wed Jun 01 10:05:31 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062306.D
Acq On : 23 Jun 2016 16:04
Operator : VG/BAM
Sample : STD1
Misc : X1;5mL
ALS Vial : 4 Sample Multiplier: 1

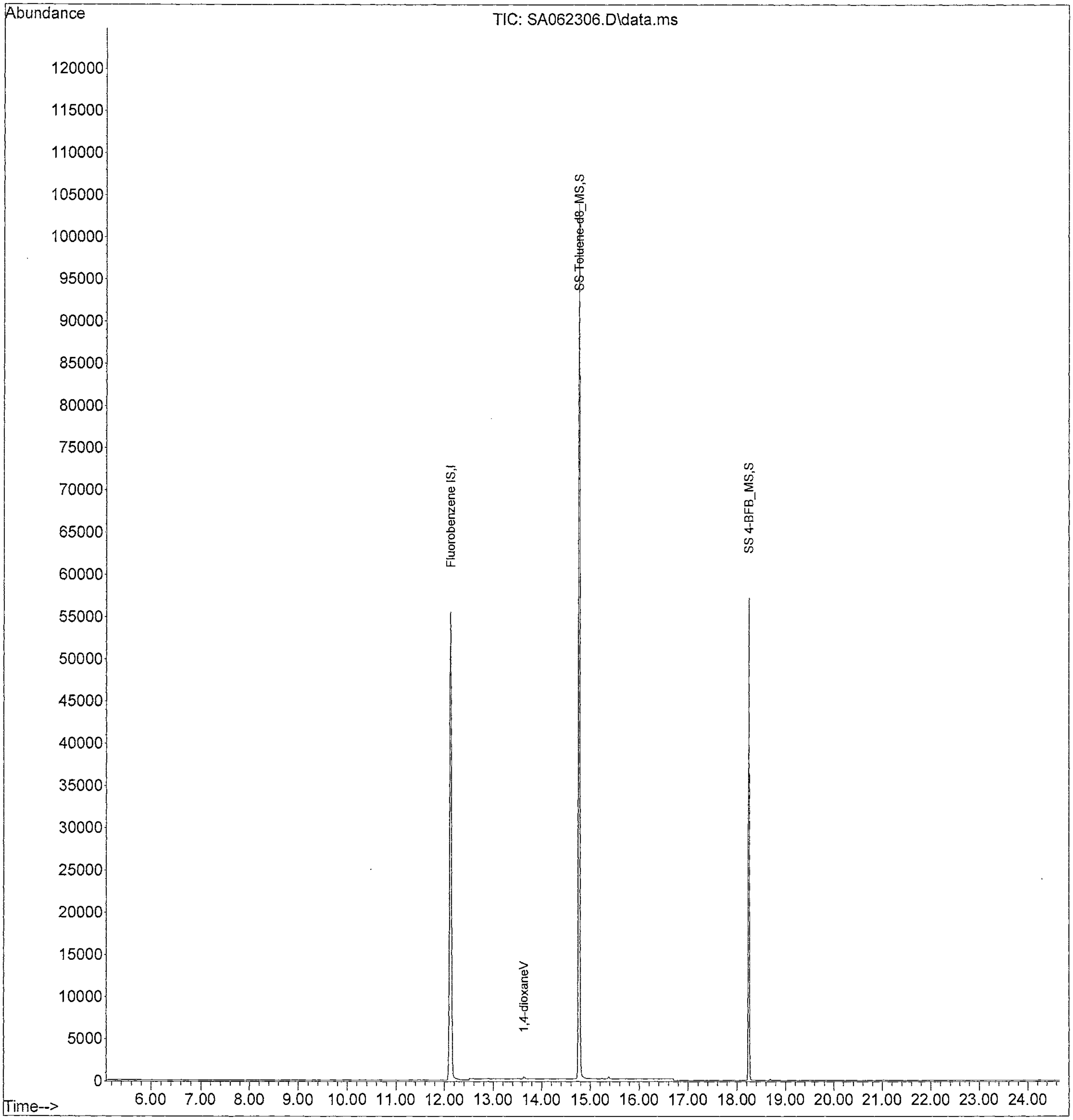
Quant Time: Jun 23 16:48:29 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Wed Jun 01 10:05:31 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	12.122	96	119234	10.00	ug/L	0.00
System Monitoring Compounds						
3) SS Toluene-d8_MS	14.766	98	116614	9.93	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	=	99.30%	
4) SS 4-BFB_MS	18.243	95	40798	10.47	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	=	104.70%	
Target Compounds						Qvalue
2] 1,4-dioxaneV	13.635	88	355	0.78	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

```
Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062306.D
Acq On    : 23 Jun 2016  16:04
Operator  : VG/BAM
Sample    : STD1
Misc      : X1;5mL
ALS Vial  : 4   Sample Multiplier: 1

Quant Time: Jun 23 16:48:29 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title  :
QLast Update : Wed Jun 01 10:05:31 2016
Response via : Initial Calibration
```



Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062307.D
Acq On : 23 Jun 2016 16:35
Operator : VG/BAM
Sample : STD2
Misc : X1;5mL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 23 17:01:52 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Wed Jun 01 10:05:31 2016
Response via : Initial Calibration

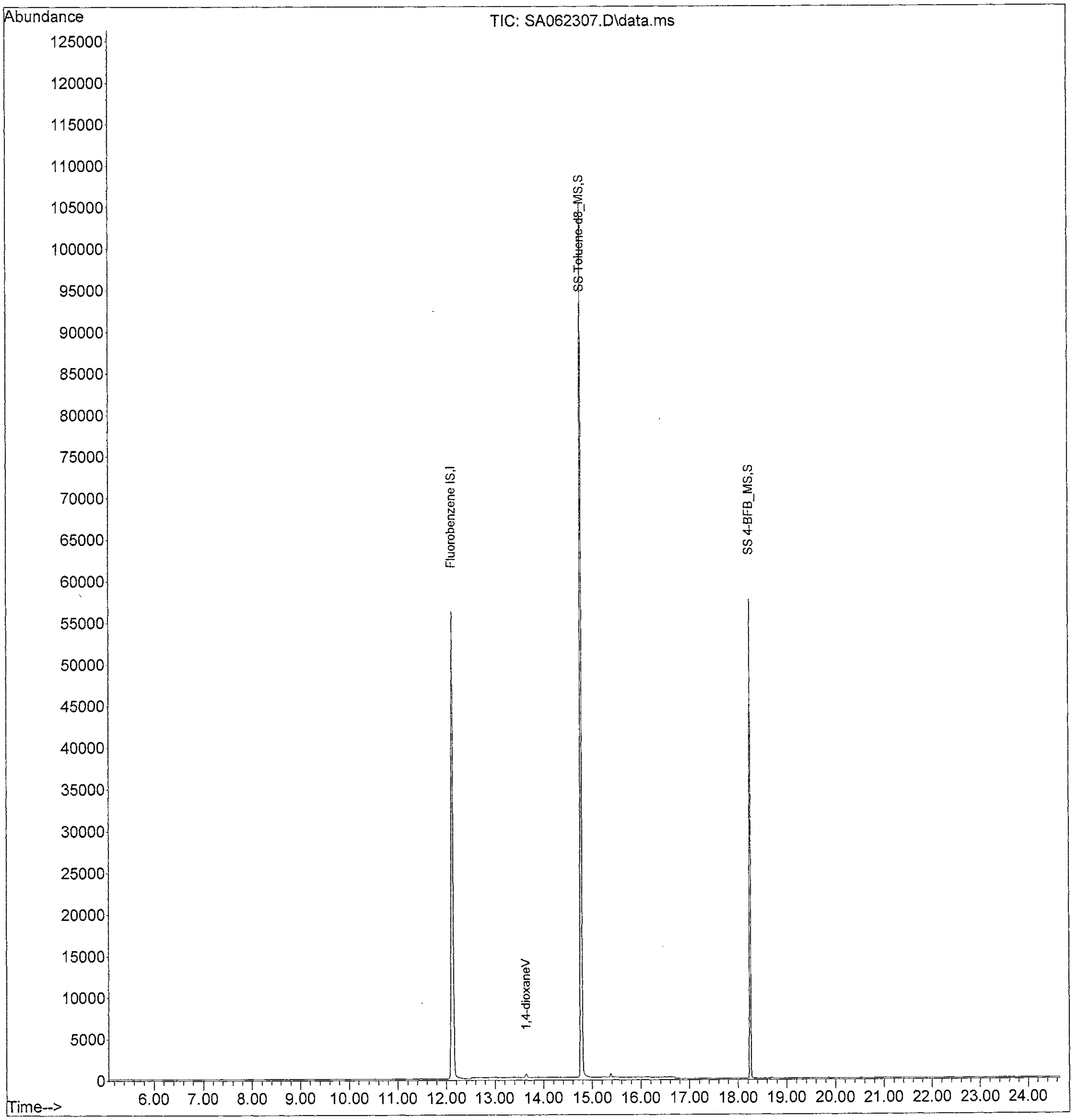
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	12.122	96	120371	10.00	ug/L	0.00
System Monitoring Compounds						
3) SS Toluene-d8_MS	14.766	98	117591	9.92	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.20%			
4) SS 4-BFB_MS	18.243	95	41138	10.46	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 104.60%			
Target Compounds						Qvalue
2] 1,4-dioxaneV	13.635	88	681	1.48	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report   (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062307.D
Acq On   : 23 Jun 2016 16:35
Operator : VG/BAM
Sample   : STD2
Misc   : X1;5mL
ALS Vial : 5   Sample Multiplier: 1

Quant Time: Jun 23 17:01:52 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Wed Jun 01 10:05:31 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062308.D
Acq On : 23 Jun 2016 17:05
Operator : VG/BAM
Sample : STD5
Misc : X1;5mL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 24 07:40:50 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Thu Jun 23 17:23:55 2016
Response via : Initial Calibration

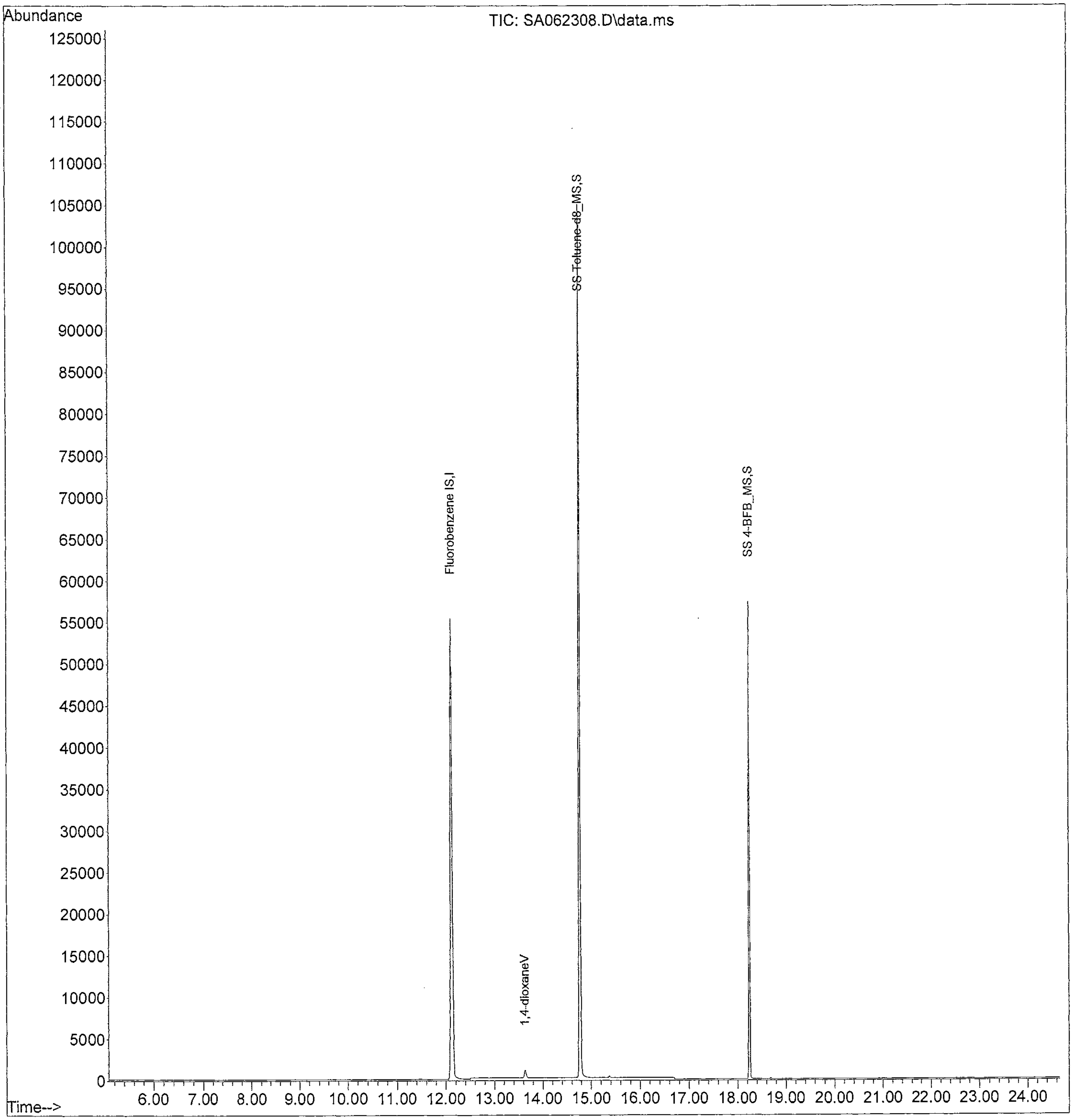
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	12.122	96	119655	10.00 ug/L	0.00
System Monitoring Compounds					
3) SS Toluene-d8_MS	14.766	98	116657	9.74 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	97.40%	
4) SS 4-BFB_MS	18.243	95	41091	9.94 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	99.40%	
Target Compounds					Qvalue
2] 1,4-dioxaneV	13.629	88	1557	4.98 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report   (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062308.D
Acq On   : 23 Jun 2016 17:05
Operator : VG/BAM
Sample   : STD5
Misc   : X1;5mL
ALS Vial : 6   Sample Multiplier: 1

Quant Time: Jun 24 07:40:50 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Thu Jun 23 17:23:55 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062309.D
Acq On : 23 Jun 2016 17:36
Operator : VG/BAM
Sample : STD10
Misc : X1;5mL
ALS Vial : 7 Sample Multiplier: 1

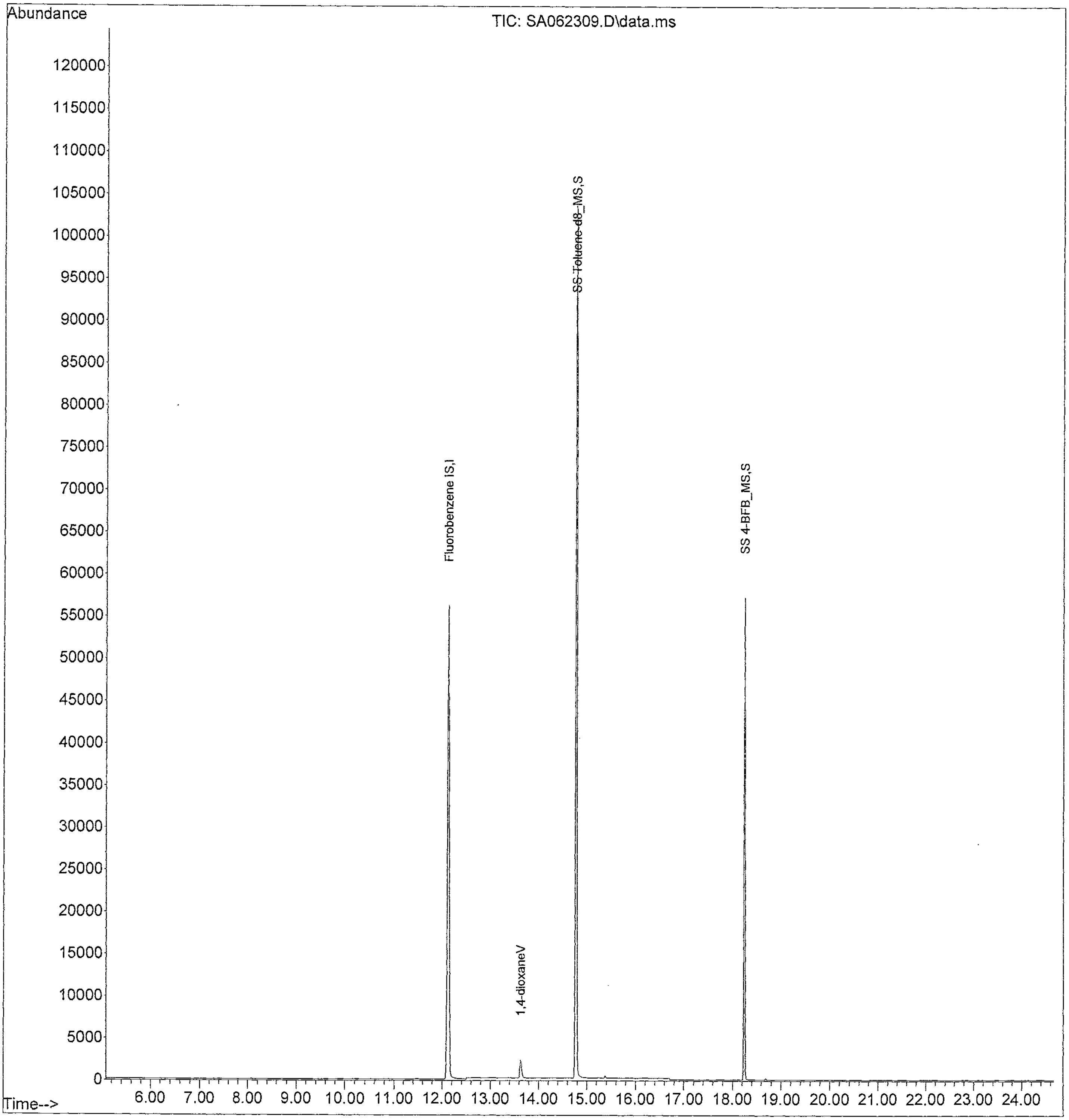
Quant Time: Jun 24 07:41:14 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Thu Jun 23 17:23:55 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	12.122	96	120382	10.00 ug/L	0.00
System Monitoring Compounds					
3) SS Toluene-d8_MS	14.766	98	116809	9.69 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	96.90%	
4) SS 4-BFB_MS	18.243	95	40943	9.85 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	98.50%	
Target Compounds					Qvalue
2] 1,4-dioxaneV	13.629	88	3468	11.24 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062309.D
Acq On : 23 Jun 2016 17:36
Operator : VG/BAM
Sample : STD10
Misc : X1;5mL
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 24 07:41:14 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Thu Jun 23 17:23:55 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062311.D
Acq On : 23 Jun 2016 18:38
Operator : VG/BAM
Sample : STD20
Misc : X1;5mL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 24 07:41:38 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Thu Jun 23 17:23:55 2016
Response via : Initial Calibration

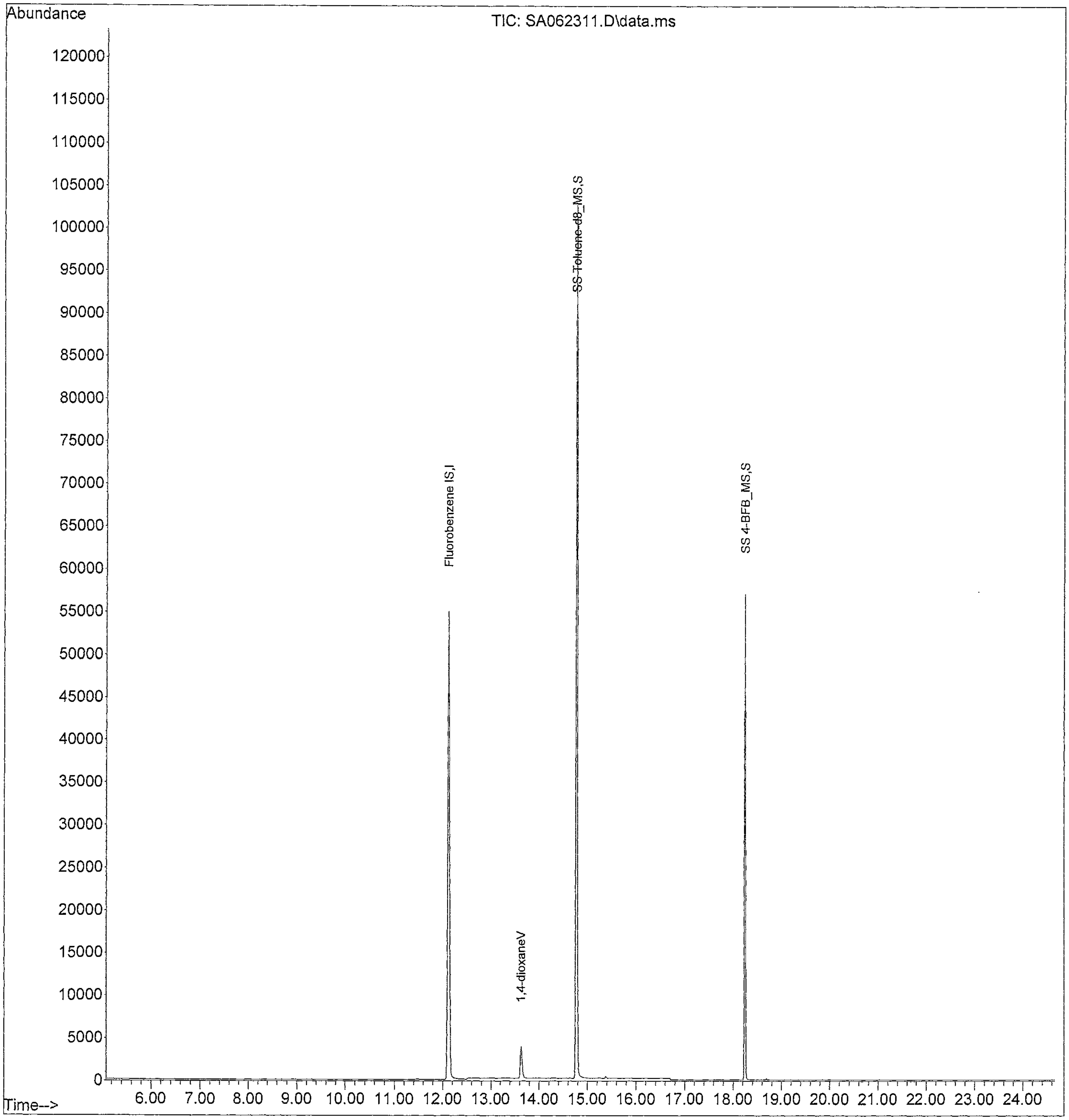
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	12.123	96	118360	10.00 ug/L	0.00
System Monitoring Compounds					
3) SS Toluene-d8_MS	14.766	98	115038	9.71 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 97.10%		
4) SS 4-BFB_MS	18.242	95	40721	9.96 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.60%		
Target Compounds					Qvalue
2] 1,4-dioxaneV	13.629	88	6235	20.69 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062311.D
Acq On : 23 Jun 2016 18:38
Operator : VG/BAM
Sample : STD20
Misc : X1;5mL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 24 07:41:38 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Thu Jun 23 17:23:55 2016
Response via : Initial Calibration

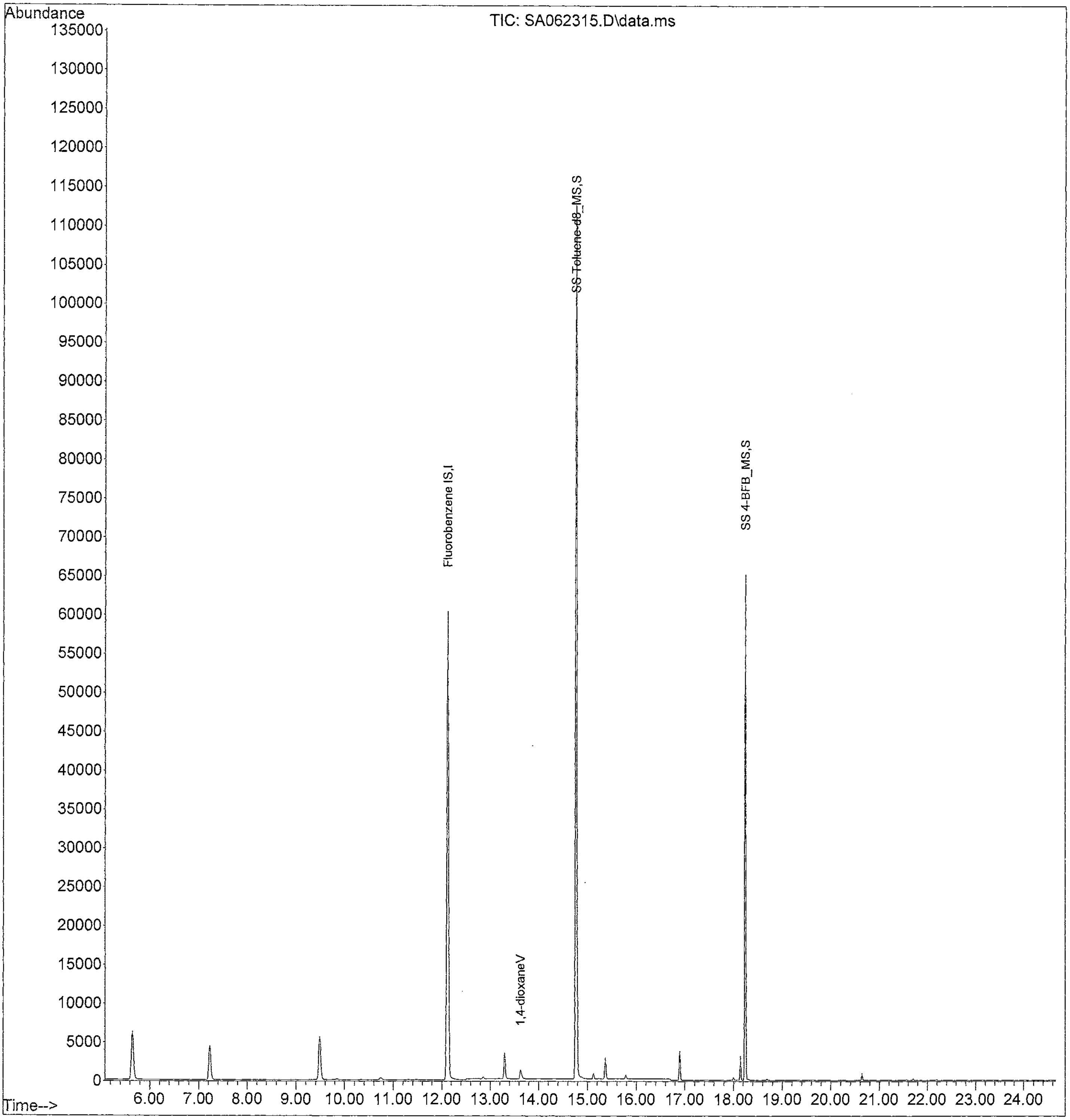


```
Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062315.D
Acq On    : 23 Jun 2016  20:43
Operator  : VG/BAM
Sample    : LCS5
Misc      : X1;5mL
ALS Vial  : 13   Sample Multiplier: 1

Quant Time: Jun 24 07:47:27 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title  :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

       Compound                   R.T. QIon  Response  Conc Units Dev(Min)
--------------------------------------------------------------------------
 Internal Standards
   1) Fluorobenzene IS          12.123   96   129098    10.00 ug/L     0.00

 System Monitoring Compounds
   3) SS Toluene-d8_MS          14.766   98   126117     9.88 ug/L    0.00
   Spiked Amount     10.000   Range  70 - 130    Recovery   =   98.80%
   4) SS 4-BFB_MS               18.243   95    47204    10.62 ug/L    0.00
   Spiked Amount     10.000   Range  70 - 130    Recovery   =  106.20%

 Target Compounds                                                Qvalue
   2] 1,4-dioxaneV              13.629   88     1800     4.67 ug/L      98
--------------------------------------------------------------------------

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
```

Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\JUN16\JUN2316\
Data File : SA062315.D
Acq On : 23 Jun 2016 20:43
Operator : VG/BAM
Sample : LCS5
Misc : X1;5mL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 24 07:47:27 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration



1,4-Dioxane 8260B SIM
Support Data

VOAMS6 Analysis Run Log

IS/SS ID= V- 4523
Standard ID= V- 4475
Gas Standard ID= V- NA
LCS/LCSD and/or MS/MSD Standard ID= V- 4476

Analyst: VG

Date: 12/13/16

ALS	Data File	Sample Name	RR	AQ	SO	Dilution	Aq Meth	An Meth	Comments	pH<2	A
1	SA12301	BFB		✓		x1	VOCMS				
2	2	STDS		✓			~~VOCMS~~	6SIMDB3	Aq Meth: VOCMSSIM14D		
3	3	LCSS		✓			~~VOCMS~~				
4	4	LCSDS		✓			~~VOCMS~~				
5	5	Blank		✓			~~VOCMS~~				
6	6	Blank		✓			~~VOCMS~~				
7	7	163787.01		✓			~~VOCMS~~				
8	8	02		✓		x100	~~VOCMS~~				
9	9	05		✓		x100	~~VOCMS~~				
10	10	04		✓		x1	~~VOCMS~~				
11	11	163786.01		✓			~~VOCMS~~				
12	12	02		✓			~~VOCMS~~				
13	13	03		✓			~~VOCMS~~				
14	14	04		✓			~~VOCMS~~				
15	15	05		✓			~~VOCMS~~				
16	16	06		✓			~~VOCMS~~				
17	17	08		✓			~~VOCMS~~				
18	18	163787.03		✓		x100	~~VOCMS~~				
19	19	05	✓	✓		x1	~~VOCMS~~				
20	20	163787.02	✓	✓		x5	~~VOCMS~~				
21	21	163783.03MS				x1	~~VOCMS~~				
22	22	03MSD					~~VOCMS~~				
23	23	Blank					~~VOCMS~~				
24	24	STD0.25					~~VOCMS~~				
25							VOCMS				
							VOCMS				
							VOCMS				
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							VOCMS				
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							VOCMS				
							VOCMS				

Samples removed from autosampler, order and pH verified by VG 12/14/16

GC/MS QA-QC Check Report

Tune File : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\SA121301.D
Tune Time : 13 Dec 2016 10:31

Daily Calibration File : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\SA121302.D

116170

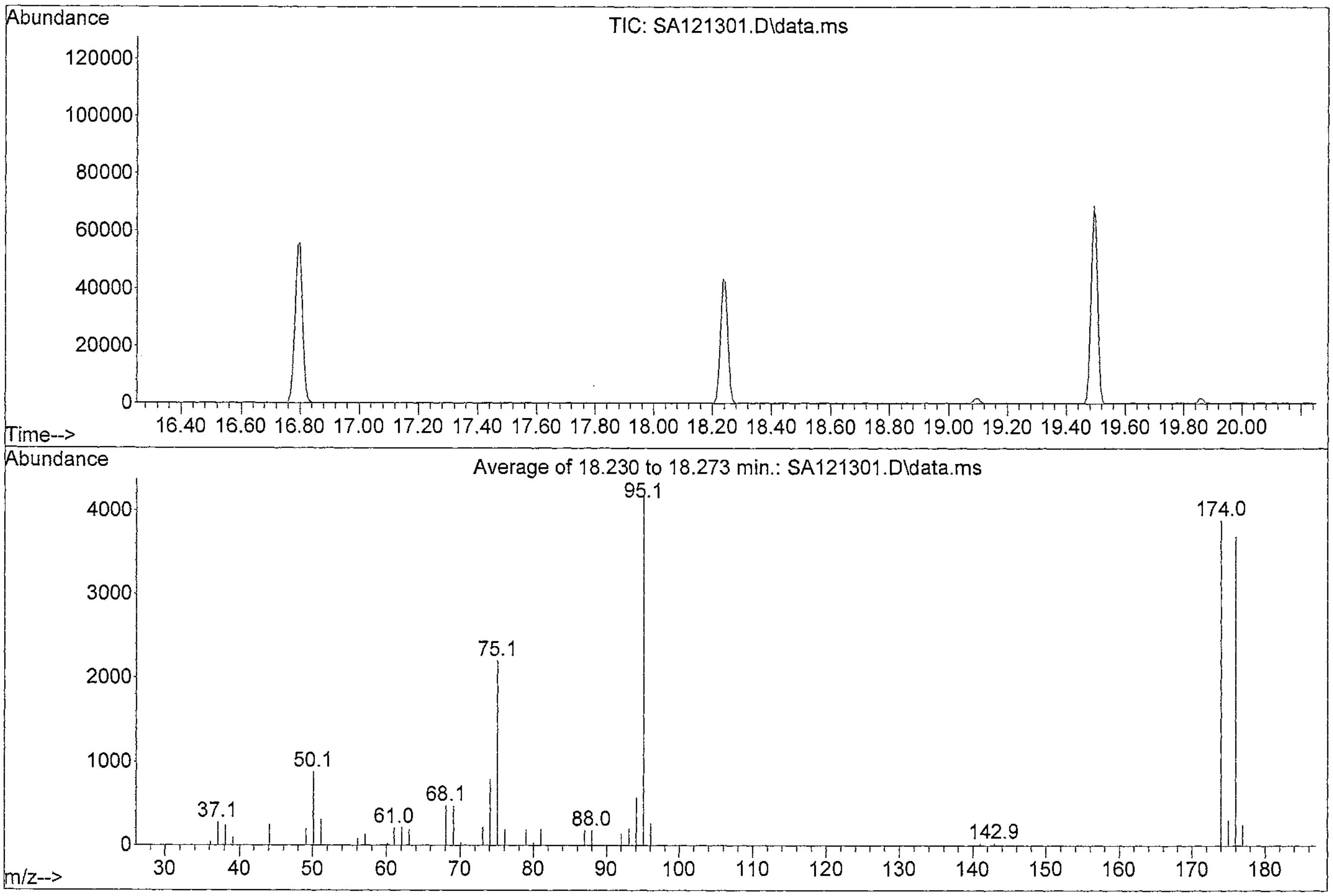
File	Sample	Surrogate Recovery %		Internal Standard Responses
SA121302.D	STD5	93	108	116170
SA121303.D	LCS5	94	116	120985
SA121304.D	LCSD5	94	116	120964
SA121305.D	BLANK	93	108	120363
SA121306.D	BLANK	93	108	118104
SA121307.D	163787.01	94	109	118600
SA121308.D	163787.02	94	109	117753
SA121309.D	163787.05	94	109	115506
SA121310.D	163787.04	94	109	114170
SA121311.D	163786.01	93	112	116054
SA121312.D	163786.02	93	111	115219
SA121313.D	163786.03	94	109	115892
SA121314.D	163786.04	94	109	115065
SA121315.D	163786.05	94	110	115477
SA121316.D	163786.06	94	109	113288
SA121317.D	163786.08	94	108	116311
SA121318.D	163787.03	94	108	111991
SA121319.D	163787.05	94	109	114752
SA121320.D	163787.02	94	109	111778

```
-------------------------------------------------------------------------
SA121321.D
         163786.03M   95  117                  113674
-------------------------------------------------------------------------
SA121322.D
         163786.03M   95  119                  117538
-------------------------------------------------------------------------
SA121323.D
         BLANK        94  109                  115985
-------------------------------------------------------------------------
SA121324.D
         STD0.25      93  109                  113620
-------------------------------------------------------------------------
(fails) - fails 12hr time check    * - fails criteria

    Created: Wed Dec 14 10:51:05 2016  VOAMS6
```

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121301.D
Acq On : 13 Dec 2016 10:31
Operator : VG
Sample : BFB
Misc : X1;5mL
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Title :
Last Update : Fri Jun 24 07:44:43 2016



Spectrum Information: Average of 18.230 to 18.273 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.1	879	PASS
75	95	30	60	52.8	2203	PASS
95	95	100	100	100.0	4175	PASS
96	95	5	9	6.4	267	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	93.1	3887	PASS
175	174	5	9	8.0	310	PASS
176	174	95	101	95.0	3695	PASS
177	176	5	9	6.8	252	PASS

Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121302.D
Acq On : 13 Dec 2016 11:03
Operator : VG
Sample : STD5
Misc : X1;5mL
ALS Vial : 2 Sample Multiplier: 1

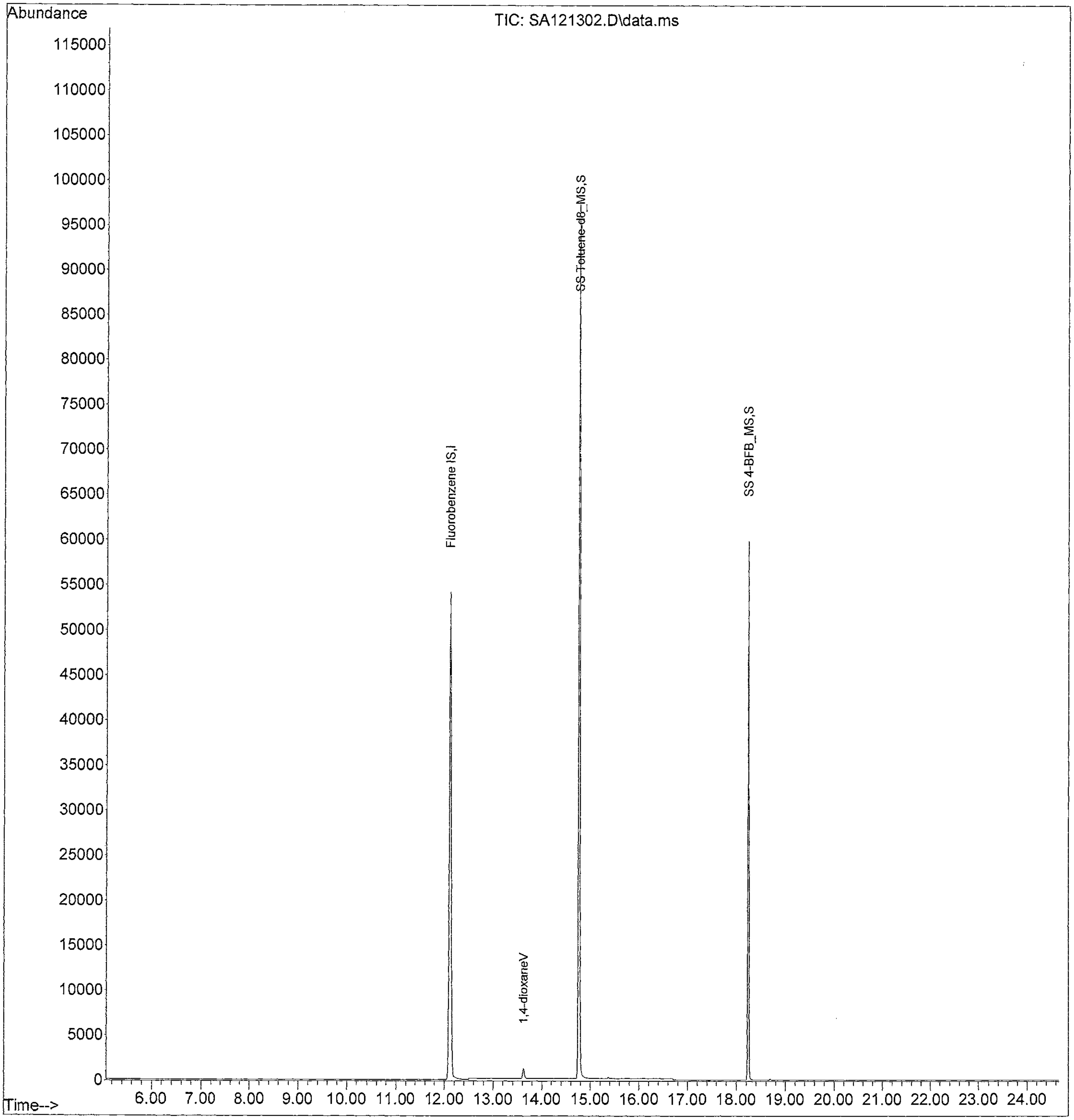
Quant Time: Dec 13 11:28:54 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	12.117	96	116170	10.00 ug/L	0.00
System Monitoring Compounds					
3) SS Toluene-d8_MS	14.766	98	107198	9.33 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	93.30%	
4) SS 4-BFB_MS	18.241	95	43190	10.80 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	108.00%	
Target Compounds					Qvalue
2] 1,4-dioxaneV	13.623	88	1763	5.08 ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

```
Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121302.D
Acq On    : 13 Dec 2016  11:03
Operator  : VG
Sample    : STD5
Misc      : X1;5mL
ALS Vial  : 2   Sample Multiplier: 1

Quant Time: Dec 13 11:28:54 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title  :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration
```



Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121303.D
Acq On : 13 Dec 2016 11:34
Operator : VG
Sample : LCS5
Misc : X1;5mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 13 14:37:16 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

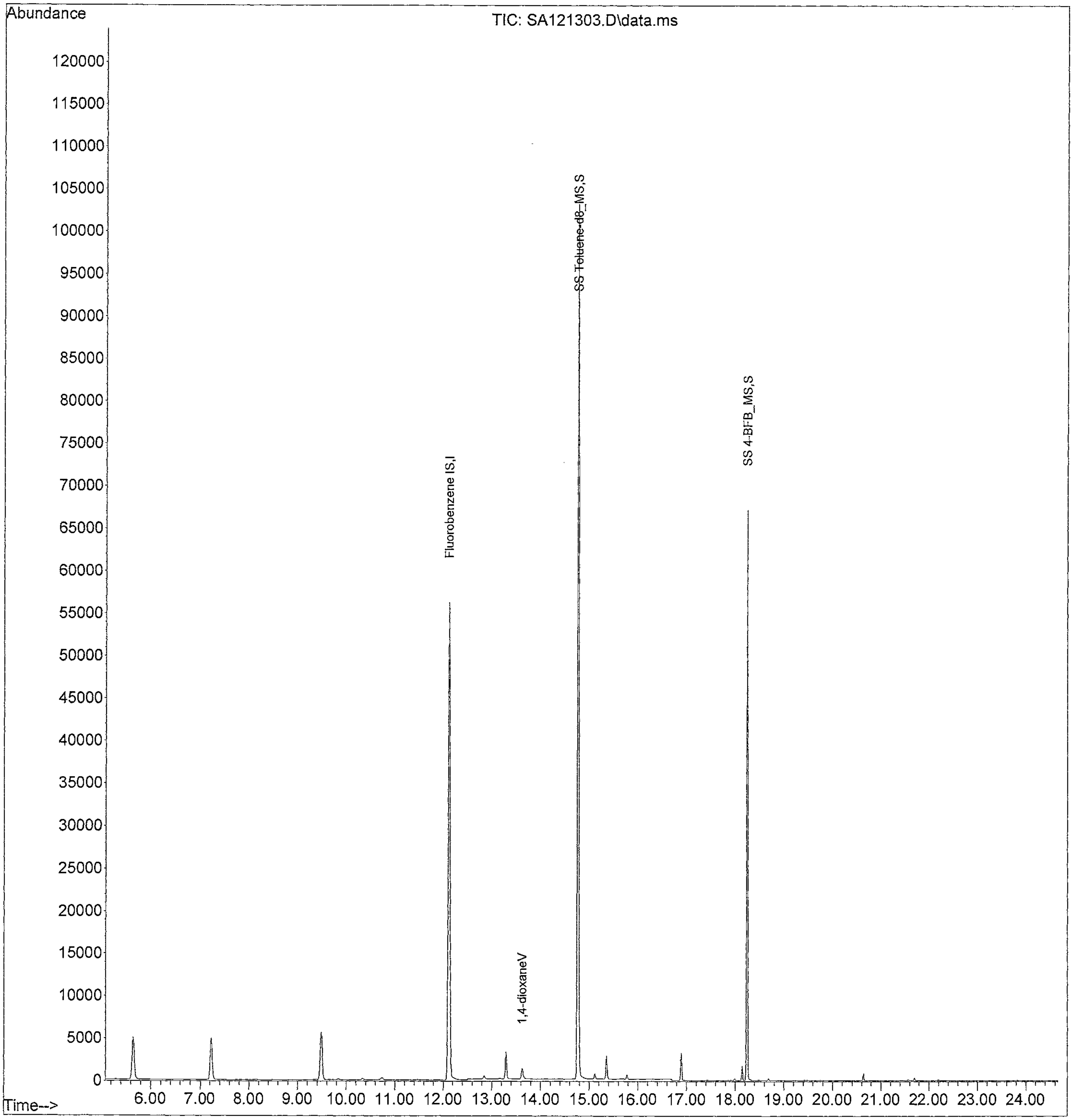
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	12.117	96	120985	10.00 ug/L	0.00
System Monitoring Compounds					
3) SS Toluene-d8_MS	14.766	98	112606	9.41 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	94.10%	
4) SS 4-BFB_MS	18.241	95	48174	11.57 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	115.70%	
Target Compounds					Qvalue
2] 1,4-dioxaneV	13.623	88	1893	5.24 ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121303.D
Acq On : 13 Dec 2016 11:34
Operator : VG
Sample : LCS5
Misc : X1;5mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 13 14:37:16 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121304.D
Acq On : 13 Dec 2016 12:05
Operator : VG
Sample : LCSD5
Misc : X1;5mL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 13 14:37:28 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

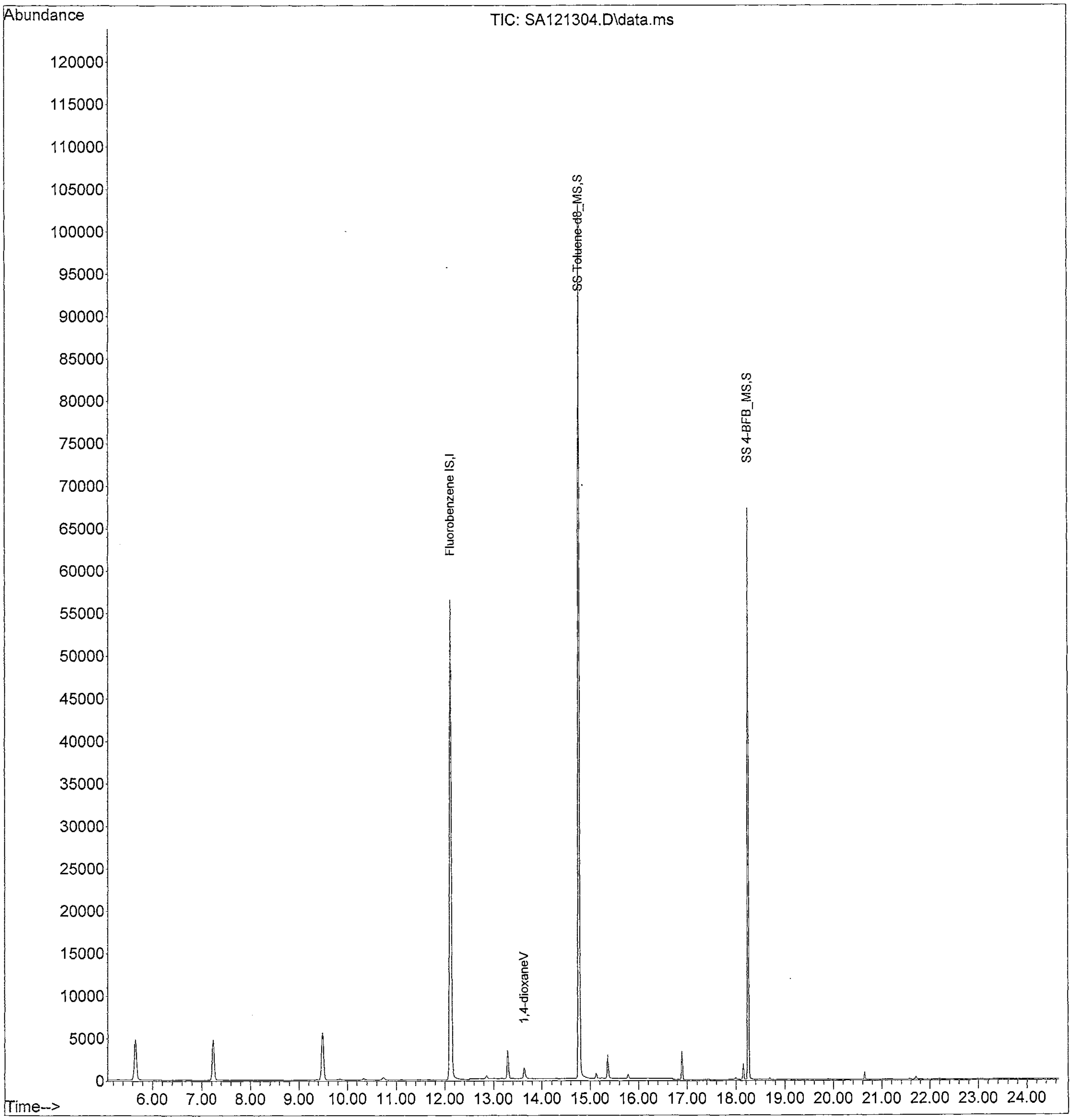
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	12.120	96	120964	10.00	ug/L	0.00
System Monitoring Compounds						
3) SS Toluene-d8_MS	14.766	98	112975	9.45	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	94.50%		
4) SS 4-BFB_MS	18.241	95	48133	11.56	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	115.60%		
Target Compounds						Qvalue
2] 1,4-dioxaneV	13.629	88	1894	5.25	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121304.D
Acq On : 13 Dec 2016 12:05
Operator : VG
Sample : LCSD5
Misc : X1;5mL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 13 14:37:28 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121306.D
Acq On : 13 Dec 2016 13:07
Operator : VG
Sample : BLANK
Misc : X1;5mL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 13 14:37:51 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

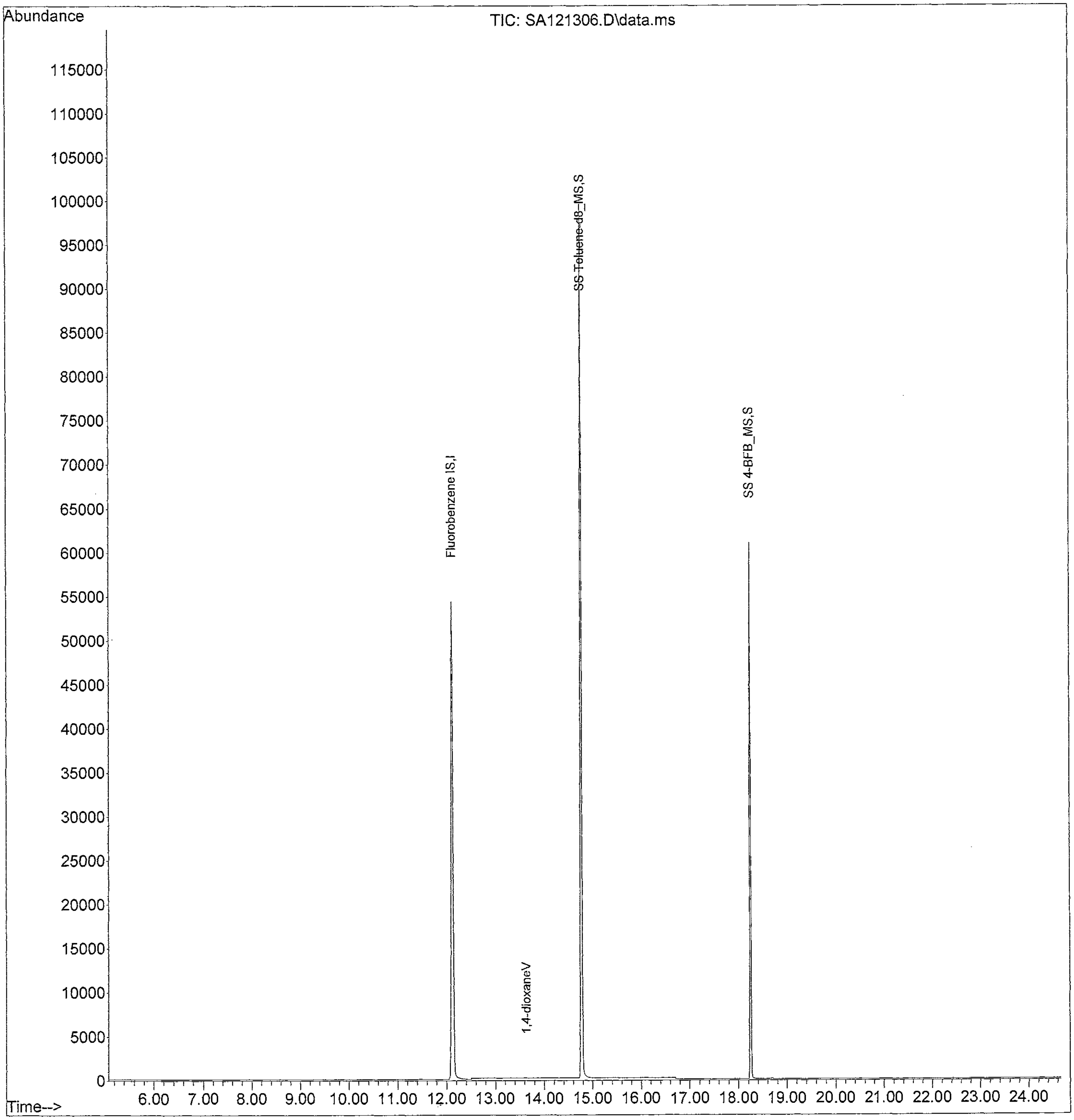
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	12.120	96	118104	10.00 ug/L	0.00
System Monitoring Compounds					
3) SS Toluene-d8_MS	14.766	98	109178	9.35 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	93.50%	
4) SS 4-BFB_MS	18.241	95	44052	10.84 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	108.40%	
Target Compounds					Qvalue
2] 1,4-dioxaneV	13.635	88	3	0.01 ug/L #	21

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121306.D
Acq On : 13 Dec 2016 13:07
Operator : VG
Sample : BLANK
Misc : X1;5mL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 13 14:37:51 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121311.D
Acq On : 13 Dec 2016 15:43
Operator : VG
Sample : 163786.01
Misc : X1;5mL
ALS Vial : 11 Sample Multiplier: 1

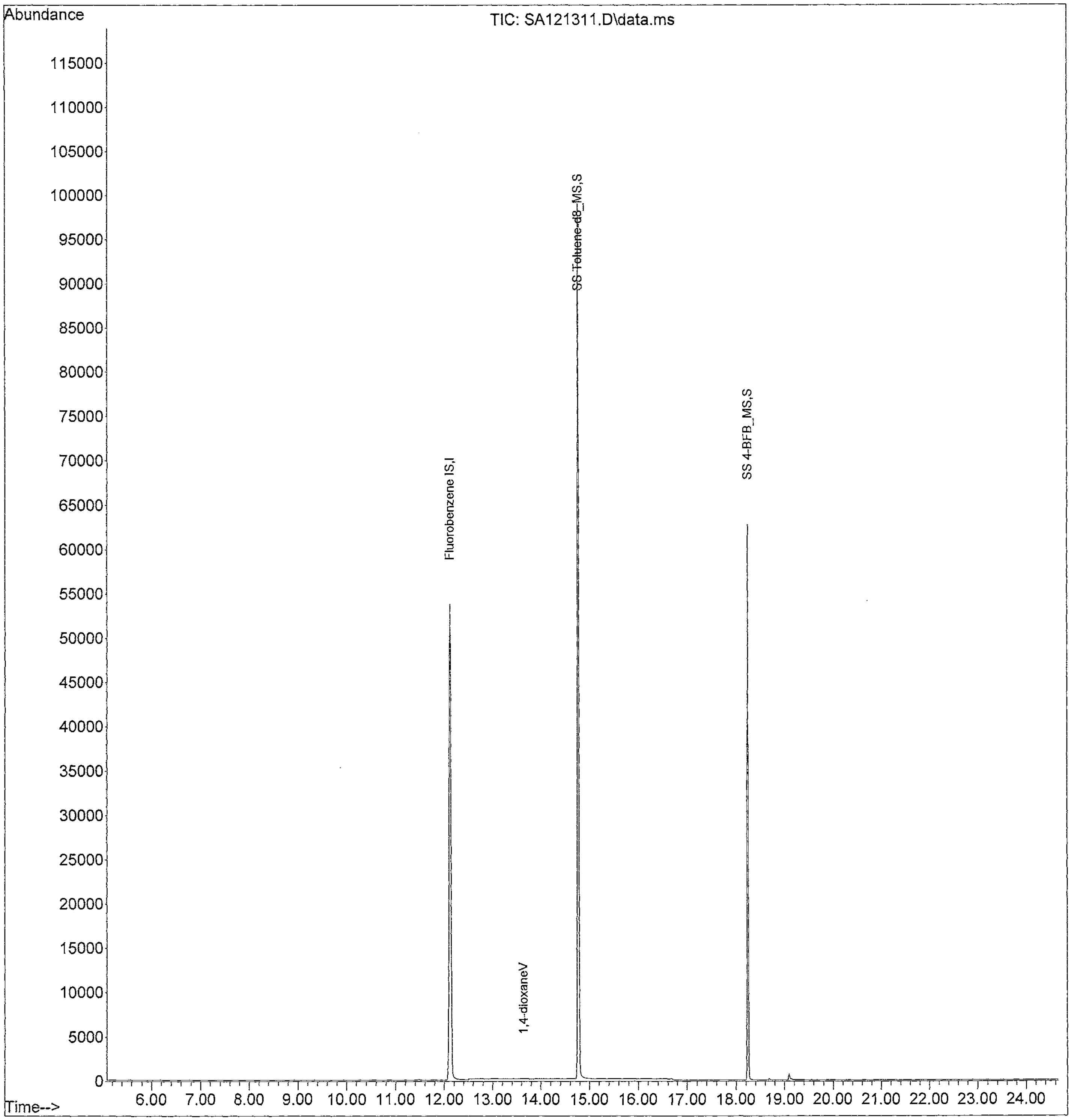
Quant Time: Dec 14 10:47:11 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	12.119	96	116054	10.00 ug/L	0.00
System Monitoring Compounds					
3) SS Toluene-d8_MS	14.766	98	107156	9.34 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	93.40%	
4) SS 4-BFB_MS	18.241	95	44762	11.21 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	112.10%	
Target Compounds					Qvalue
2] 1,4-dioxaneV	13.642	88	47	0.14 ug/L #	83

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121311.D
Acq On : 13 Dec 2016 15:43
Operator : VG
Sample : 163786.01
Misc : X1;5mL
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 14 10:47:11 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

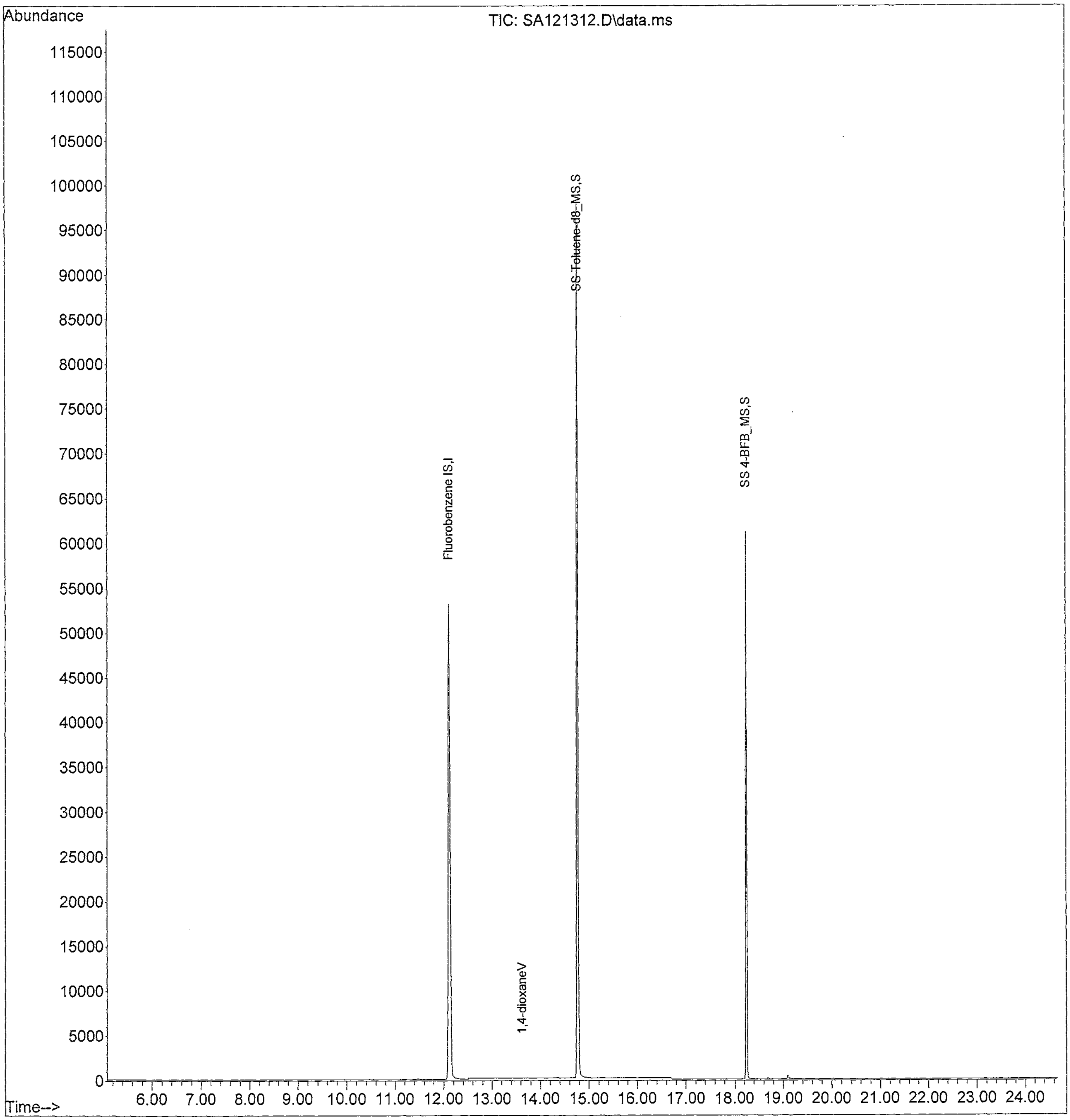


Quantitation Report (Not Reviewed)

```
Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121312.D
Acq On    : 13 Dec 2016  16:14
Operator  : VG
Sample    : 163786.02
Misc      : X1;5mL
ALS Vial  : 12   Sample Multiplier: 1

Quant Time: Dec 14 10:47:14 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title  :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

        Compound                     R.T. QIon  Response  Conc Units Dev(Min)
 --------------------------------------------------------------------------
 Internal Standards
   1) Fluorobenzene IS             12.120   96   115219    10.00 ug/L     0.00

 System Monitoring Compounds
   3) SS Toluene-d8_MS             14.766   98   106430     9.34 ug/L    0.00
   Spiked Amount     10.000   Range  70 - 130    Recovery    =   93.40%
   4) SS 4-BFB_MS                  18.241   95    43880    11.06 ug/L    0.00
   Spiked Amount     10.000   Range  70 - 130    Recovery    =  110.60%

 Target Compounds                                                 Qvalue
   2] 1,4-dioxaneV                 13.623   88        6     0.02 ug/L #    36
 --------------------------------------------------------------------------

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
```

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121312.D
Acq On   : 13 Dec 2016 16:14
Operator : VG
Sample   : 163786.02
Misc   : X1;5mL
ALS Vial : 12   Sample Multiplier: 1

Quant Time: Dec 14 10:47:14 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121313.D
Acq On : 13 Dec 2016 16:45
Operator : VG
Sample : 163786.03
Misc : X1;5mL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 14 10:47:17 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

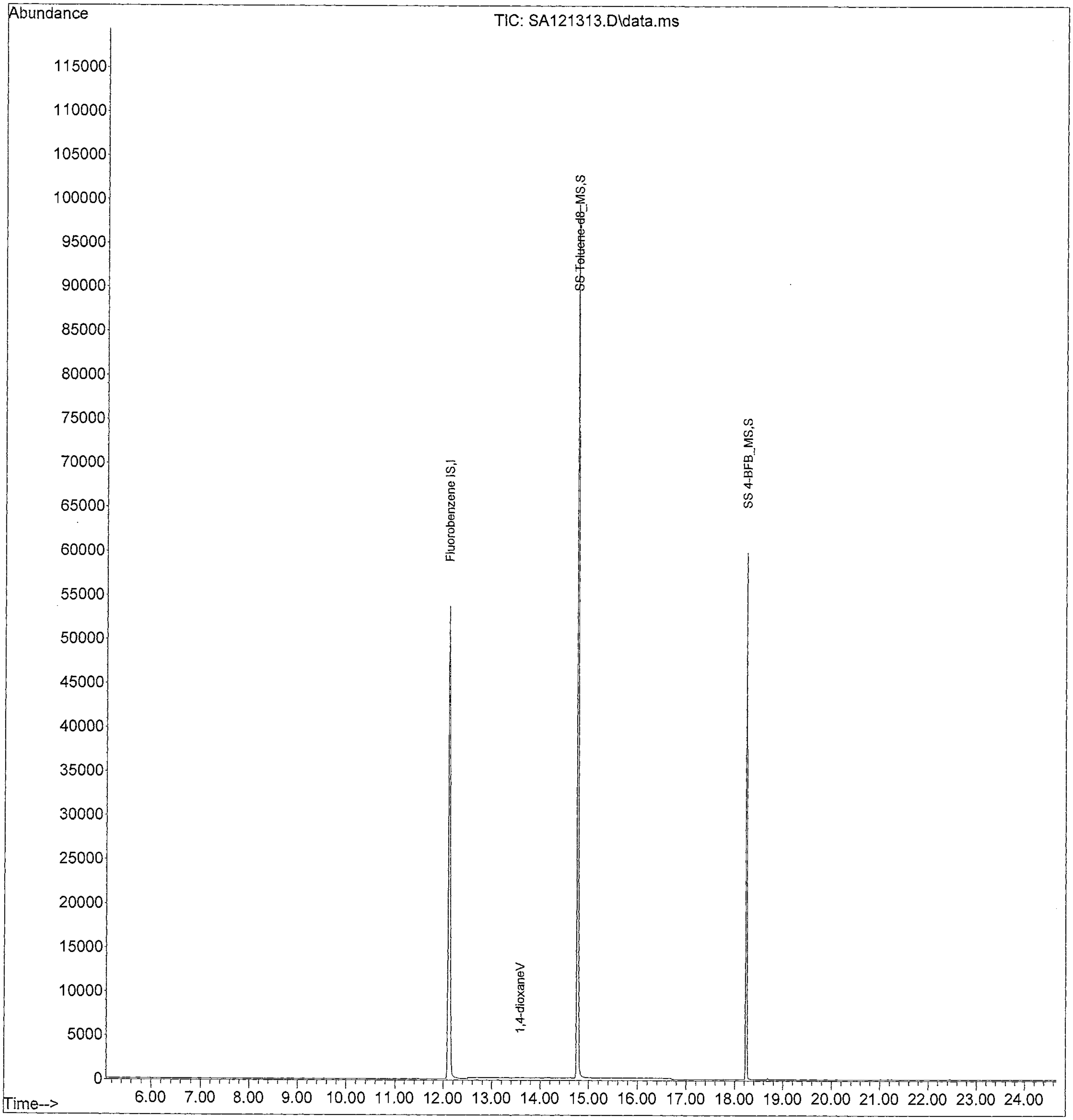
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	12.119	96	115892	10.00 ug/L	0.00
System Monitoring Compounds					
3) SS Toluene-d8_MS	14.766	98	107766	9.40 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	94.00%	
4) SS 4-BFB_MS	18.241	95	43533	10.91 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	109.10%	
Target Compounds					Qvalue
2] 1,4-dioxaneV	13.585	88	4	0.01 ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121313.D
Acq On : 13 Dec 2016 16:45
Operator : VG
Sample : 163786.03
Misc : X1;5mL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 14 10:47:17 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121314.D
Acq On : 13 Dec 2016 17:16
Operator : VG
Sample : 163786.04
Misc : X1;5mL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 14 10:47:20 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

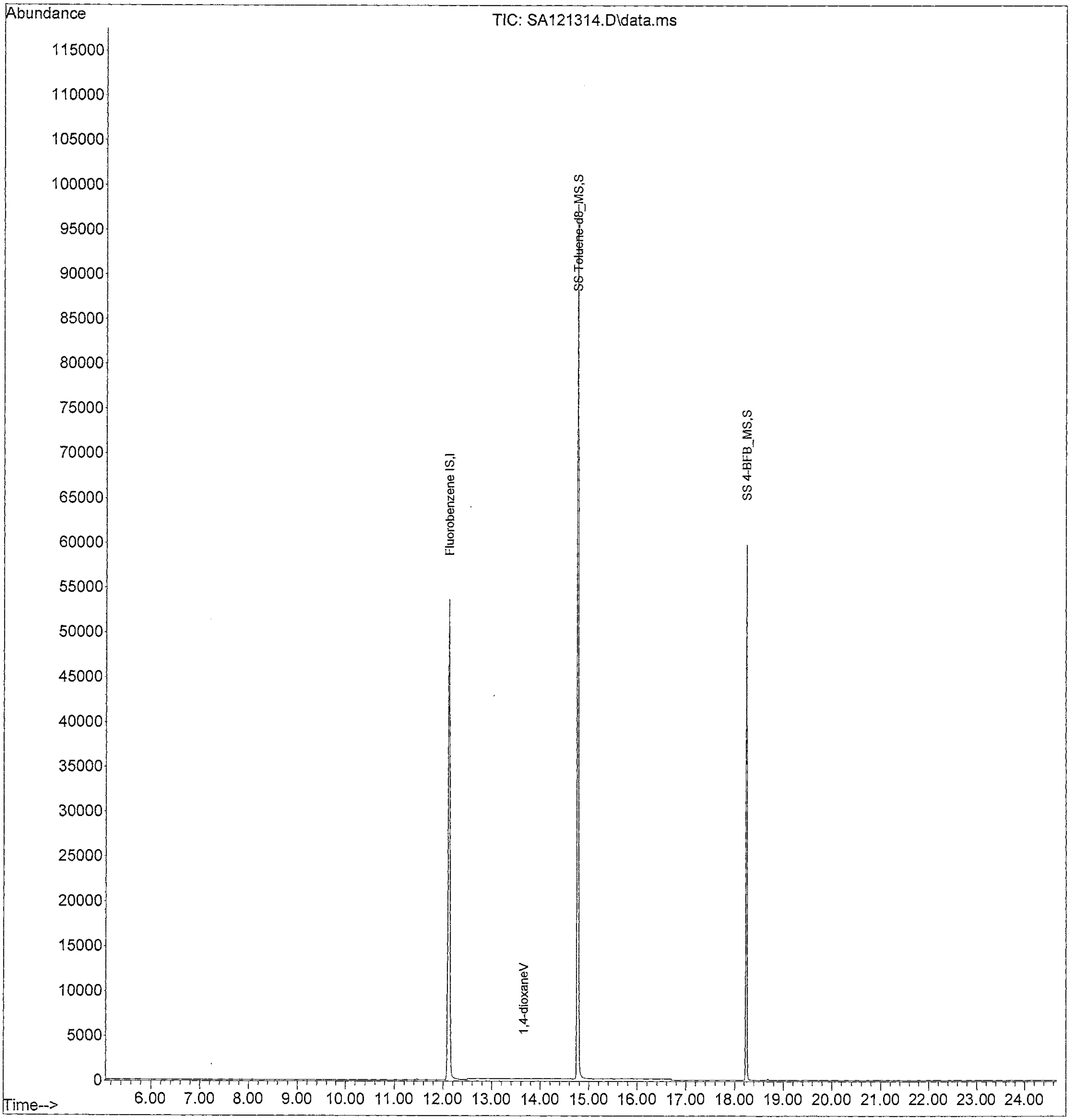
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	12.120	96	115065	10.00	ug/L	0.00
System Monitoring Compounds						
3) SS Toluene-d8_MS	14.766	98	106888	9.40	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	94.00%		
4) SS 4-BFB_MS	18.241	95	43303	10.93	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	109.30%		
Target Compounds						Qvalue
2] 1,4-dioxaneV	13.660	88	8	0.02	ug/L #	61

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121314.D
Acq On : 13 Dec 2016 17:16
Operator : VG
Sample : 163786.04
Misc : X1;5mL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 14 10:47:20 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121315.D
Acq On : 13 Dec 2016 17:47
Operator : VG
Sample : 163786.05
Misc : X1;5mL
ALS Vial : 15 Sample Multiplier: 1

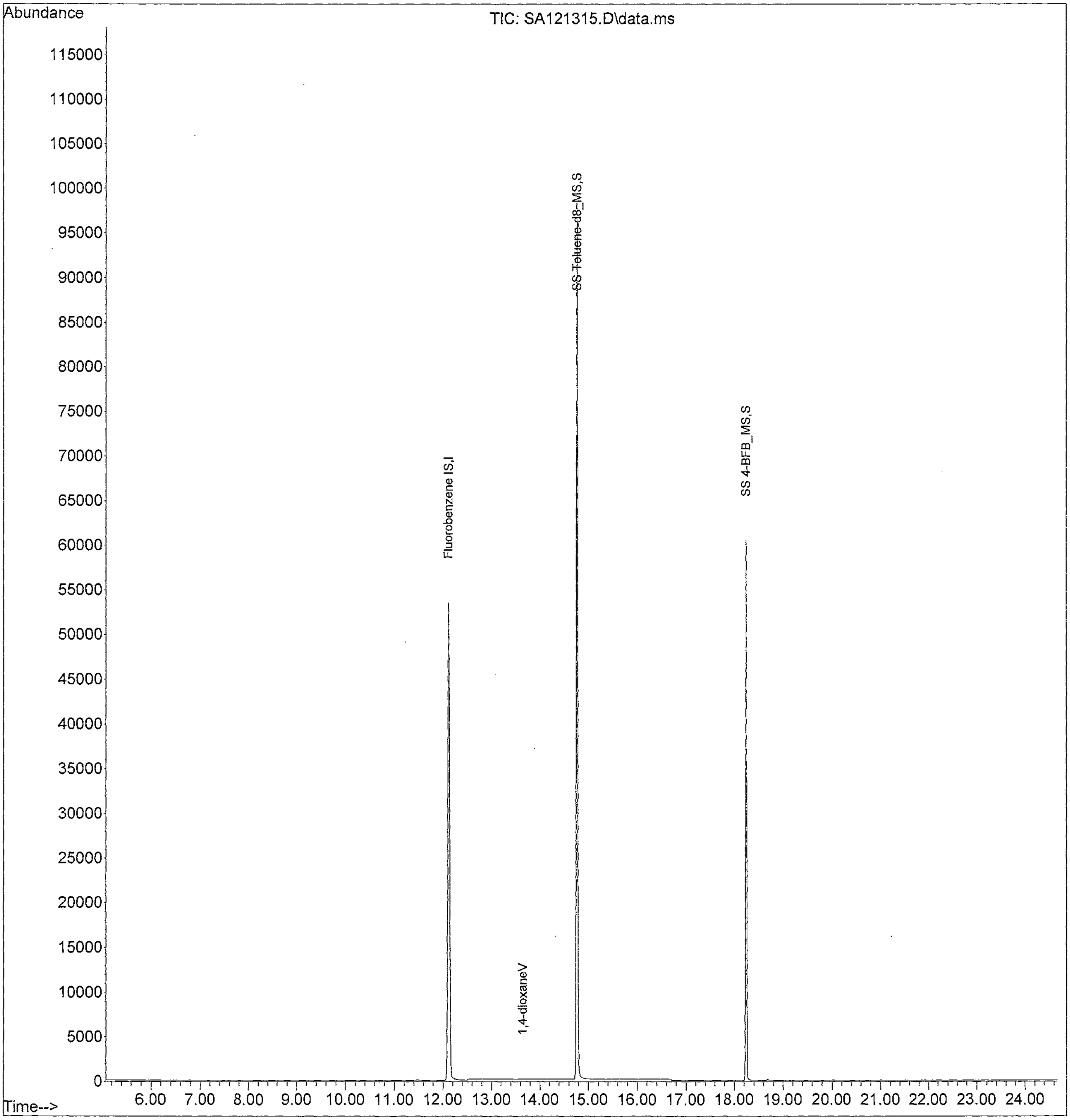
Quant Time: Dec 14 10:47:23 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	12.119	96	115477	10.00	ug/L	0.00
System Monitoring Compounds						
3) SS Toluene-d8_MS	14.766	98	107067	9.38	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	93.80%		
4) SS 4-BFB_MS	18.241	95	43632	10.98	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	109.80%		
Target Compounds						Qvalue
2] 1,4-dioxaneV	13.648	88	8	0.02	ug/L #	31

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CG 12/14/16

```
Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121315.D
Acq On    : 13 Dec 2016  17:47
Operator  : VG
Sample    : 163786.05
Misc      : X1;5mL
ALS Vial  : 15   Sample Multiplier: 1

Quant Time: Dec 14 10:47:23 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title  :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration
```



Quantitation Report (Not Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121316.D
Acq On : 13 Dec 2016 18:18
Operator : VG
Sample : 163786.06
Misc : X1;5mL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 14 10:47:26 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	12.120	96	113288	10.00 ug/L	0.00
System Monitoring Compounds					
3) SS Toluene-d8_MS	14.766	98	104911	9.37 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 93.70%	
4) SS 4-BFB_MS	18.239	95	42468	10.89 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery	= 108.90%	
Target Compounds					Qvalue
2] 1,4-dioxaneV	13.635	88	137	0.41 ug/L	91

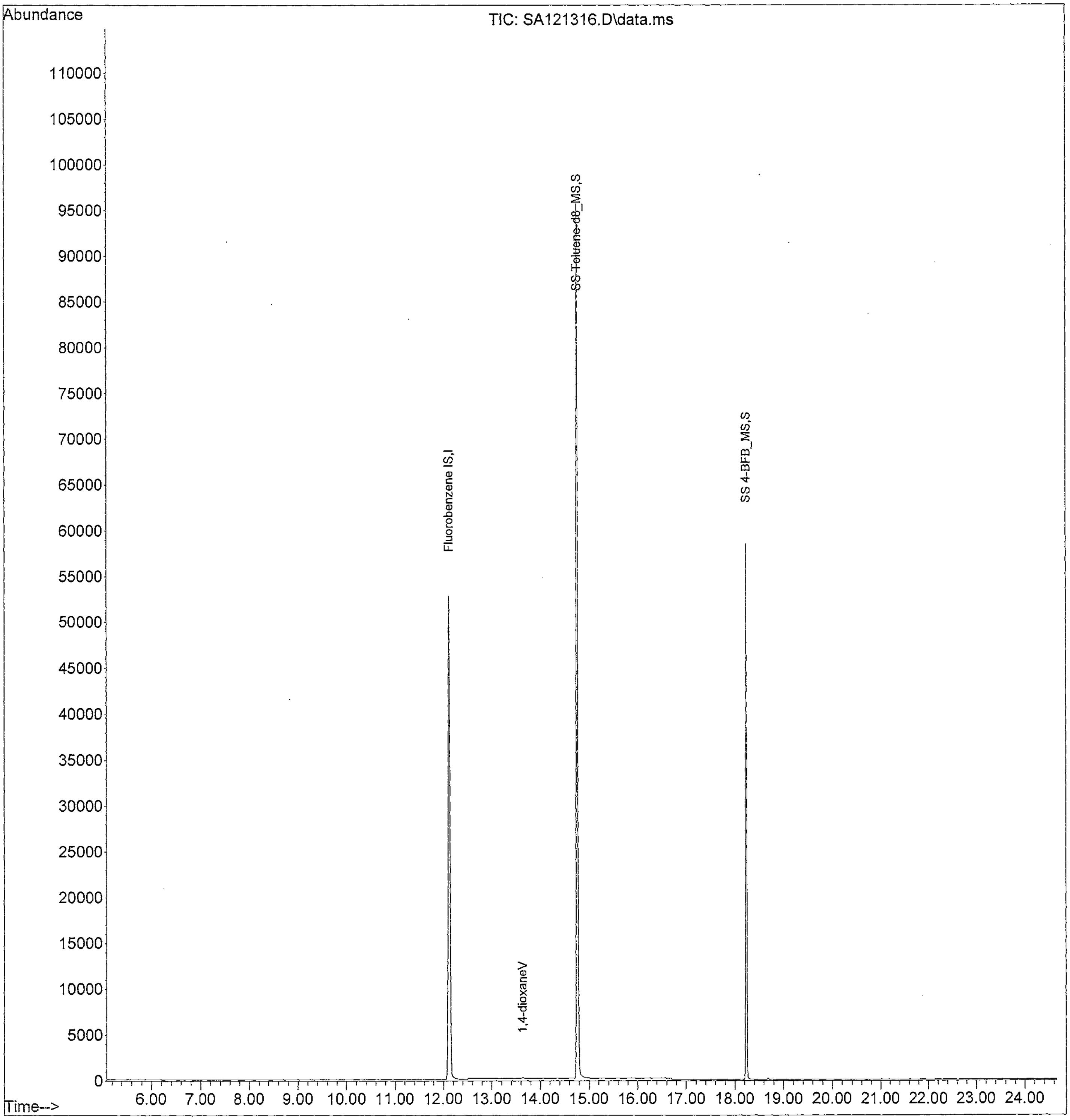
(#) = qualifier out of range (m) = manual integration (+) = signals summed

CG 12/14/16

Quantitation Report (Not Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121316.D
Acq On : 13 Dec 2016 18:18
Operator : VG
Sample : 163786.06
Misc : X1;5mL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 14 10:47:26 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121317.D
Acq On : 13 Dec 2016 18:49
Operator : VG
Sample : 163786.08
Misc : X1;5mL
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 14 10:47:29 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

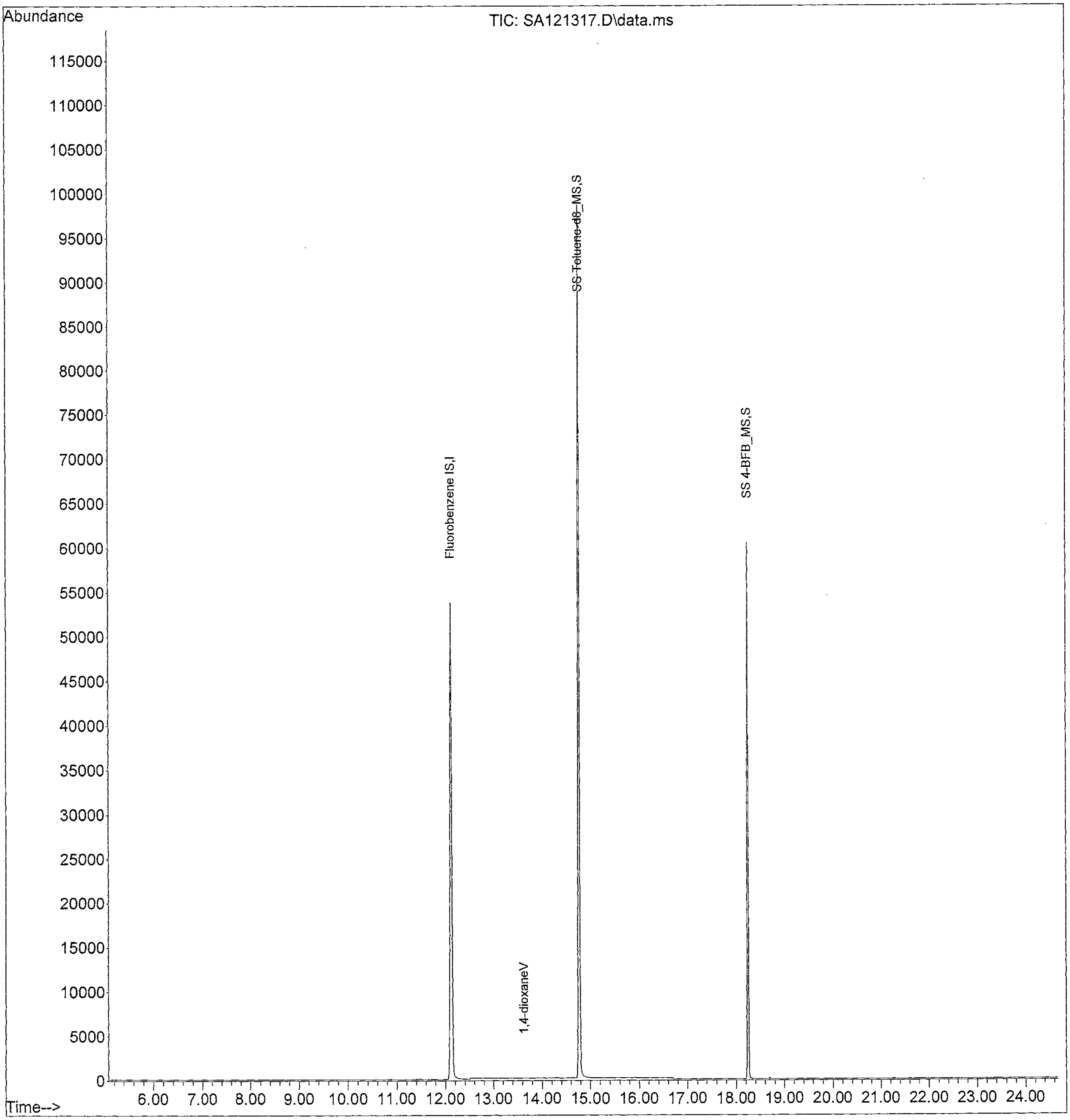
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene IS	12.120	96	116311	10.00	ug/L	0.00
System Monitoring Compounds						
3) SS Toluene-d8_MS	14.766	98	107616	9.36	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 93.60%			
4) SS 4-BFB_MS	18.241	95	43402	10.84	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 108.40%			
Target Compounds						Qvalue
2] 1,4-dioxaneV	13.629	88	24	0.07	ug/L #	67

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121317.D
Acq On : 13 Dec 2016 18:49
Operator : VG
Sample : 163786.08
Misc : X1;5mL
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 14 10:47:29 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

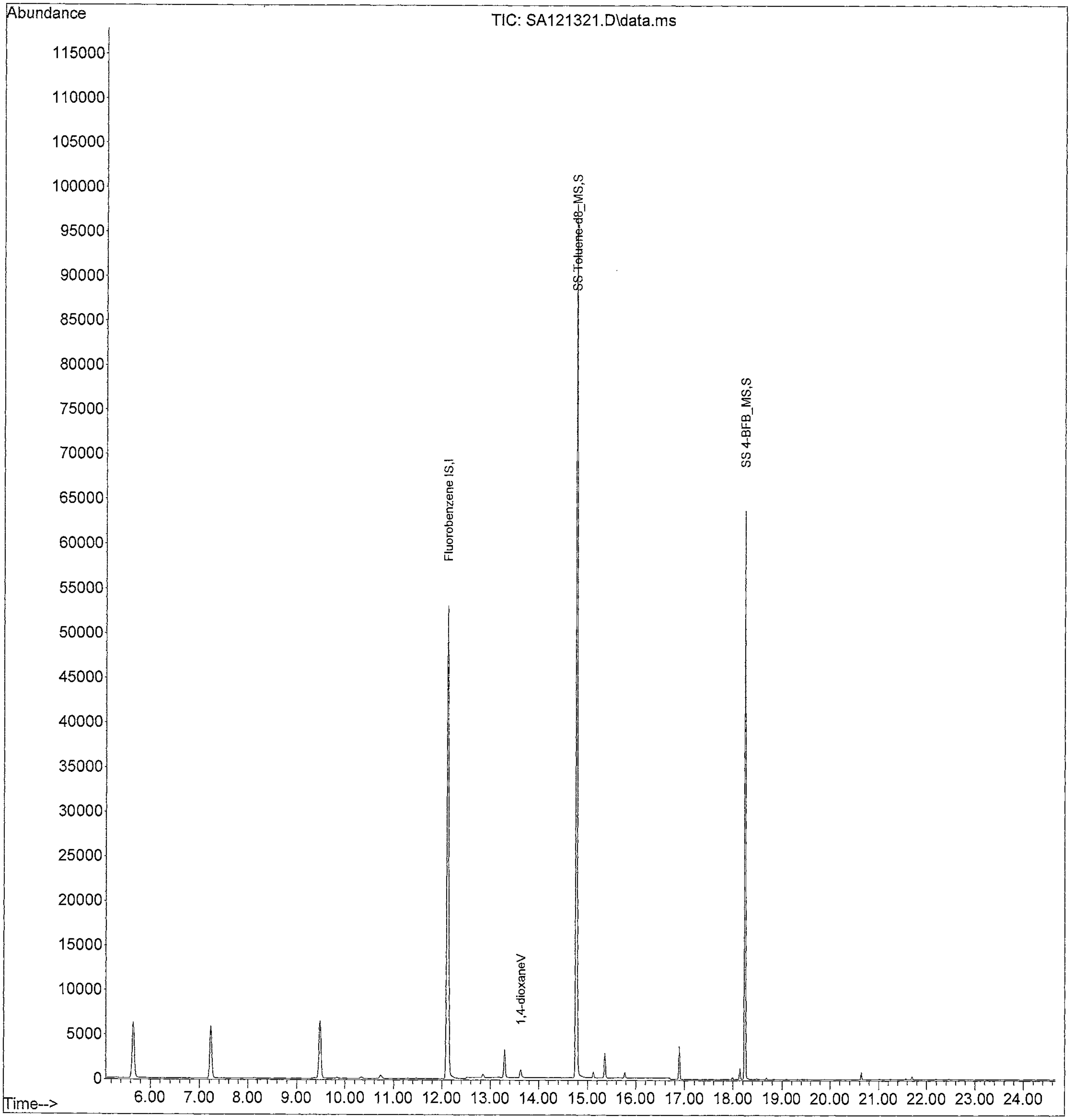
```
Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121321.D
Acq On    : 13 Dec 2016  20:52
Operator  : VG
Sample    : 163786.03MS
Misc      : X1;5mL
ALS Vial  : 21   Sample Multiplier: 1

Quant Time: Dec 14 10:52:16 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title  :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

       Compound                     R.T. QIon  Response  Conc Units Dev(Min)
----------------------------------------------------------------------------
Internal Standards
  1) Fluorobenzene IS            12.120   96   113674    10.00 ug/L     0.00

System Monitoring Compounds
  3) SS Toluene-d8_MS            14.766   98   106298     9.46 ug/L    0.00
  Spiked Amount     10.000   Range  70 - 130    Recovery    =    94.60%
  4) SS 4-BFB_MS                 18.239   95    45795    11.70 ug/L    0.00
  Spiked Amount     10.000   Range  70 - 130    Recovery    =   117.00%

Target Compounds                                                    Qvalue
  2] 1,4-dioxaneV                13.629   88     1356     4.00 ug/L       91
----------------------------------------------------------------------------

(#) = qualifier out of range (m) = manual integration (+) = signals summed
```

VG 12/14/16

Quantitation Report (Not Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121321.D
Acq On : 13 Dec 2016 20:52
Operator : VG
Sample : 163786.03MS
Misc : X1;5mL
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Dec 14 10:52:16 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration



Quantitation Report   (Not Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121322.D
Acq On   : 13 Dec 2016 21:23
Operator : VG
Sample   : 163786.03MSD
Misc   : X1;5mL
ALS Vial : 22   Sample Multiplier: 1

Quant Time: Dec 14 10:52:19 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	12.119	96	117538	10.00 ug/L	0.00
System Monitoring Compounds					
3) SS Toluene-d8_MS	14.766	98	110171	9.48 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	94.80%	
4) SS 4-BFB_MS	18.240	95	48230	11.92 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery =	119.20%	
Target Compounds					Qvalue
2] 1,4-dioxaneV	13.623	88	1648	4.70 ug/L	93

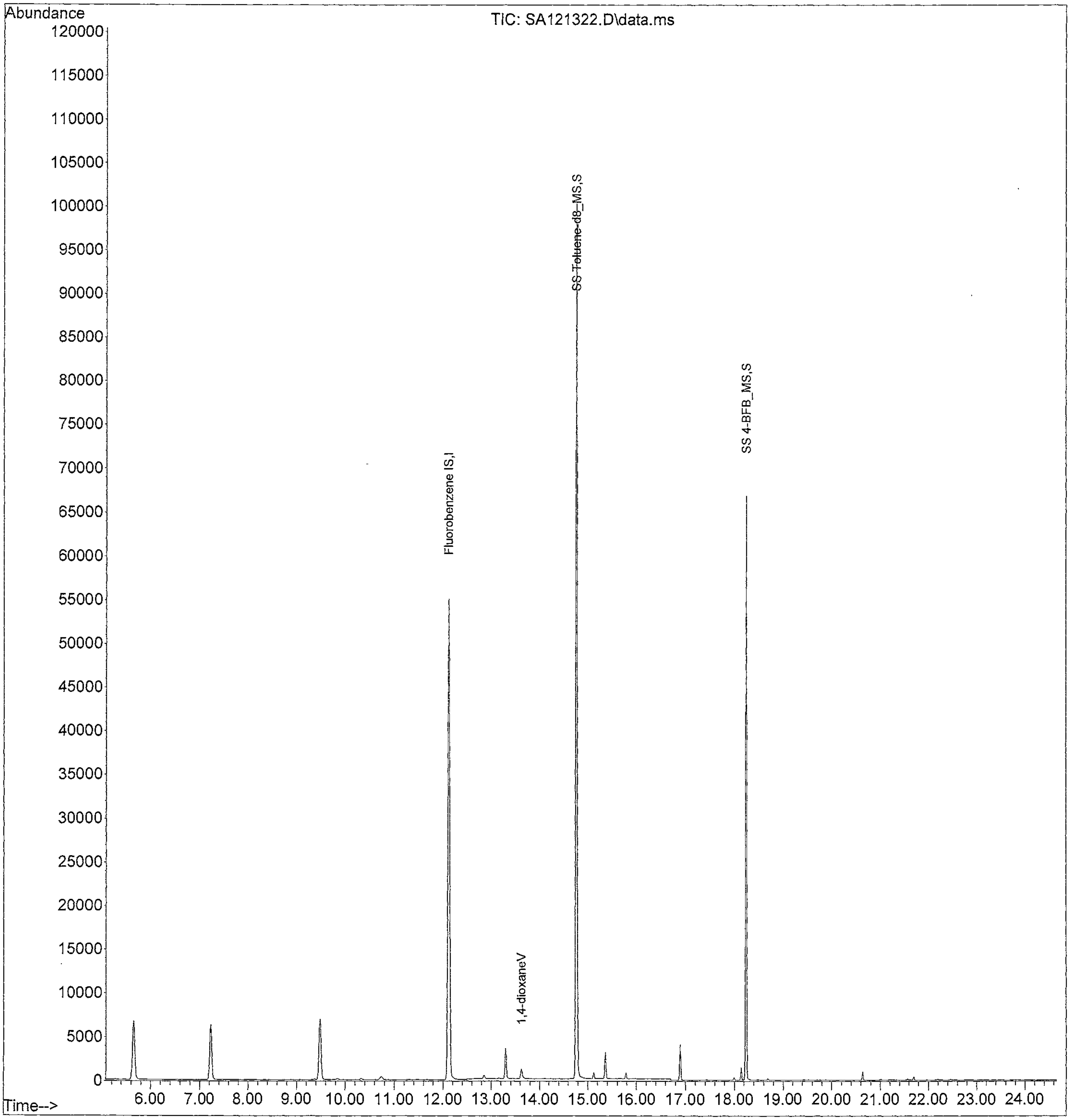
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Cy 12/14/16

Quantitation Report (Not Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121322.D
Acq On : 13 Dec 2016 21:23
Operator : VG
Sample : 163786.03MSD
Misc : X1;5mL
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Dec 14 10:52:19 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121324.D
Acq On : 13 Dec 2016 22:25
Operator : VG
Sample : STD0.25
Misc : X1;5mL
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Dec 14 10:46:20 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration

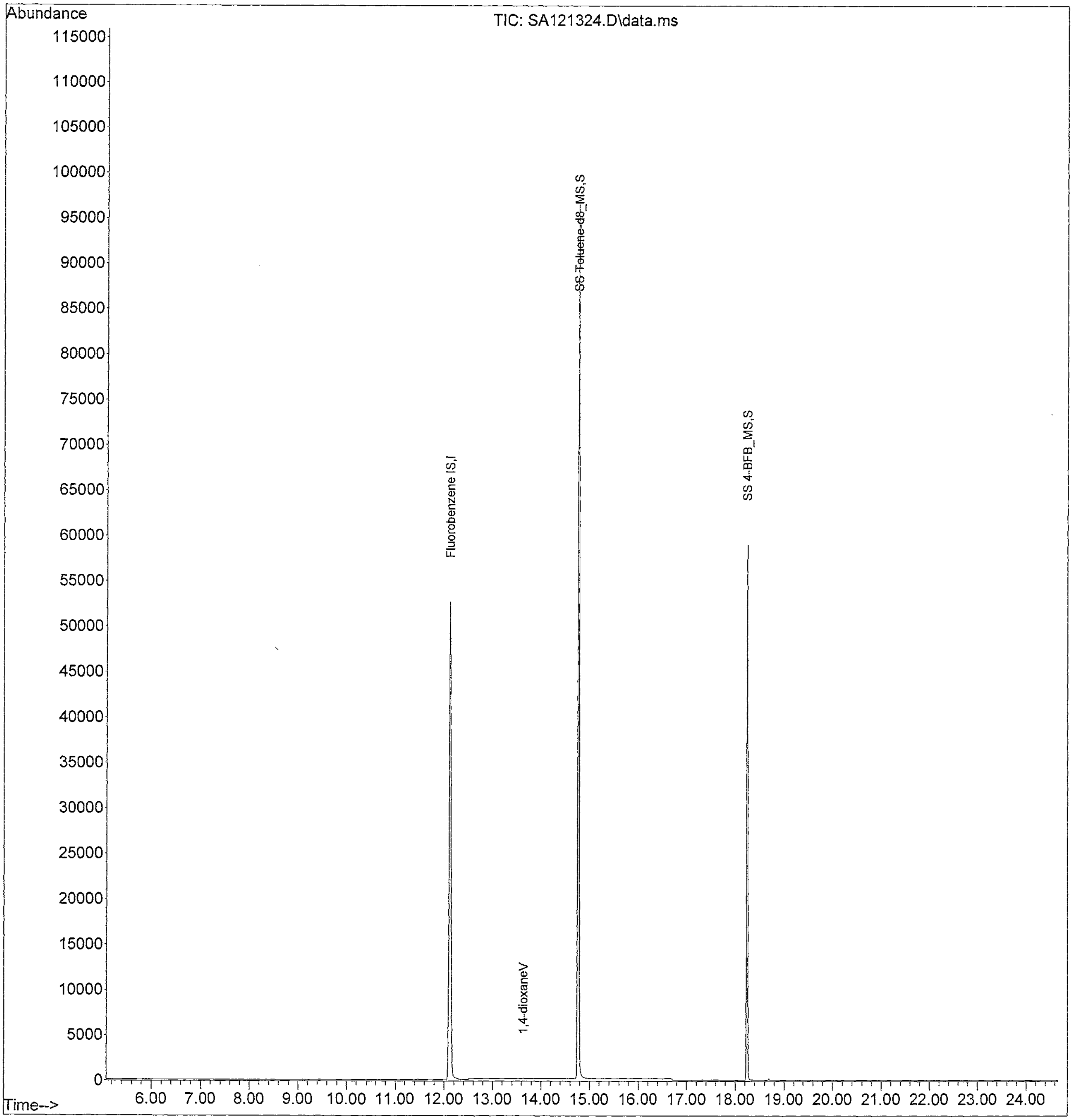
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene IS	12.120	96	113620	10.00 ug/L	0.00
System Monitoring Compounds					
3) SS Toluene-d8_MS	14.766	98	104950	9.34 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 93.40%		
4) SS 4-BFB_MS	18.241	95	42468	10.86 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 108.60%		
Target Compounds					Qvalue
2] 1,4-dioxaneV	13.635	88	96	0.28 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report   (QT Reviewed)

Data Path : C:\MassHunter\GCMS\1\data\2016\DEC16\DEC1316\
Data File : SA121324.D
Acq On   : 13 Dec 2016 22:25
Operator : VG
Sample   : STD0.25
Misc   : X1;5mL
ALS Vial : 24   Sample Multiplier: 1

Quant Time: Dec 14 10:46:20 2016
Quant Method : C:\MassHunter\GCMS\1\methods\6SIM0623.M
Quant Title :
QLast Update : Fri Jun 24 07:44:43 2016
Response via : Initial Calibration



METALS 200.8/6020

Linear Range Check

Linear Range Check

EAI SDG(s) 157671 **Metals**

Sample ID: 2ppm LR
Sample Date/Time: Wednesday, June 08, 2016 17:14:06
Sample Description: Linear Range Check
Dataset File: C:\Elandata\Dataset\default\2ppm LR.73433
Concentration Results

Analyte	Mass	Conc.	Units	QC Std % R	Int Std % R
Ag	107	1781.22374	ug/L	89.06	
Ag	109	1823.79017	ug/L	91.19	
Al	27	2021.81477	ug/L	101.09	
As	75	1941.03789	ug/L	97.05	
Ba	137	2010.62742	ug/L	100.53	
Be	9	2123.48402	ug/L	106.17	
Ca	44	1969.63983	ug/L	98.48	
Cd	111	1989.1261	ug/L	99.46	
Cd	114	1951.21838	ug/L	97.56	
Co	59	1897.36408	ug/L	94.87	
Cr	52	1964.96029	ug/L	98.25	
Cu	63	1796.75959	ug/L	89.84	
Cu	65	1853.23259	ug/L	92.66	
Fe	54	1968.49654	ug/L	98.42	
Fe	56	2033.68726	ug/L	101.68	
Fe	57	1970.83415	ug/L	98.54	
Ge	72		ug/L		87.16
Hg	200	0.051131	ug/L	0.00	
Hg	202	0.047923	ug/L	0.00	
Ho	165		ug/L		92.629
In	115		ug/L		88.618
K	39	2000.57371	ug/L	100.03	
Mg	24	1996.14985	ug/L	99.81	
Mg	25	1975.78688	ug/L	98.79	
Mn	55	1945.59476	ug/L	97.28	
Mo	95	1998.36192	ug/L	99.92	
Na	23	2037.5203	ug/L	101.88	
Ni	60	1922.45596	ug/L	96.12	
Ni	62	1906.28329	ug/L	95.31	
P	31	-3.00207	ug/L	-0.15	
Pb	208	1977.77228	ug/L	98.89	
Sb	121	2036.56592	ug/L	101.83	
Sb	123	2024.3423	ug/L	101.22	
Sc	45		ug/L		90.206
Se	82	1952.07172	ug/L	97.60	
Tl	205	2009.15389	ug/L	100.46	
V	51	1934.87208	ug/L	96.74	
Zn	64	1923.7265	ug/L	96.19	
Zn	66	1919.55185	ug/L	95.98	
Zn	68	1933.39192	ug/L	96.67	

Sample ID: 5ppm LR
Sample Date/Time: Wednesday, June 08, 2016 17:20:39
Sample Description: Linear Range Check
Dataset File: C:\Elandata\Dataset\default\5ppm LR.73434
Concentration Results

Analyte	Mass	Conc.	Units	QC Std % R	Int Std % R
Ag	107	4371.0398	ug/L	87.42	
Ag	109	4409.9828	ug/L	88.20	
Al	27	5066.91843	ug/L	101.34	
As	75	4868.22278	ug/L	97.36	
Ba	137	5110.14873	ug/L	102.20	
Be	9	5384.64843	ug/L	107.69	
Ca	44	4847.29974	ug/L	96.95	
Cd	111	4966.95285	ug/L	99.34	
Cd	114	4869.51966	ug/L	97.39	
Co	59	4696.03657	ug/L	93.92	
Cr	52	4927.82577	ug/L	98.56	
Cu	63	4423.67384	ug/L	88.47	
Cu	65	4528.9936	ug/L	90.58	
Fe	54	5036.8852	ug/L	100.74	
Fe	56	5012.73818	ug/L	100.25	
Fe	57	4902.53864	ug/L	98.05	
Ge	72		ug/L		81.772
Hg	200	0.097469	ug/L	0.00	
Hg	202	0.100773	ug/L	0.00	
Ho	165		ug/L		88.68
In	115		ug/L		81.953
K	39	5000.63563	ug/L	100.01	
Mg	24	4914.81652	ug/L	98.30	
Mg	25	4874.99965	ug/L	97.50	
Mn	55	4913.41101	ug/L	98.27	
Mo	95	4954.36916	ug/L	99.09	
Na	23	5163.1727	ug/L	103.26	
Ni	60	4704.00894	ug/L	94.08	
Ni	62	4700.02709	ug/L	94.00	
P	31	-0.377357	ug/L	-0.01	
Pb	208	4843.98573	ug/L	96.88	
Sb	121	5166.47533	ug/L	103.33	
Sb	123	5211.16833	ug/L	104.22	
Sc	45		ug/L		82.569
Se	82	4670.56692	ug/L	93.41	
Tl	205	4923.20948	ug/L	98.46	
V	51	4871.07293	ug/L	97.42	
Zn	64	4765.5648	ug/L	95.31	
Zn	66	4917.66451	ug/L	98.35	
Zn	68	4997.43185	ug/L	99.95	

Silver: Recovery of the Linear Range check was outside of the acceptance criteria for the 2ppm check at mass 107 and at both masses for the 5ppm ckeck. There is no impact to the data as all field sample concentrations were ND.

Copper: Recovery of the Linear Range check was outside of the acceptance criteria for both the 2ppm and 5ppm checks for mass 63. There is no impact to the data as all field sample concentrations were below the highest calibration standard concentration.

Sample ID: 2ppm LR
Sample Date/Time: Wednesday, June 08, 2016 17:14:06
Autosampler Position: 155
Sample Description:
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\2ppm LR.73433

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		10671.600	ug/L	
Be	9	2123.484021	419085.920	ug/L	44.427
B	10	2.249305	161.668	ug/L	0.478
B	11	1.435005	605.354	ug/L	0.353
C	12		327705.529	ug/L	
Na	23	2037.520299	8475556.463	ug/L	48.746
Mg	24	1996.149854	6016450.823	ug/L	47.873
Mg	25	1975.786876	864174.386	ug/L	73.650
Al	27	2021.814771	9622530.517	ug/L	67.821
Si	28		24940.847	ug/L	
P	31	-3.002070	6192.111	ug/L	1.692
S	32		52582677.064	ug/L	
Cl	35		5568737.036	ug/L	
K	39	2000.573712	12589830.129	ug/L	33.339
Ca	44	1969.639828	452774.764	ug/L	42.837
Sc	45		133765.068	ug/L	
Ti	47	0.168641	156.668	ug/L	0.015
Ti	48	1.461847	8370.872	ug/L	0.217
V	51	1934.872077	13607119.524	ug/L	64.973
ClO	51		14239142.809	ug/L	
Cr	52	1964.960293	11493216.316	ug/L	58.538
Cr	53	1913.407805	1352359.240	ug/L	69.493
Fe	54	1968.496535	960286.306	ug/L	62.506
Mn	55	1945.594762	17901054.695	ug/L	61.453
Fe	56	2033.687258	16722431.364	ug/L	128.523
Fe	57	1970.834154	369156.063	ug/L	38.660
Co	59	1897.364082	13026517.403	ug/L	65.483
Ni	60	1922.455964	2761432.813	ug/L	85.993
Ni	62	1906.283286	409715.013	ug/L	77.800
Cu	63	1796.759588	6037044.181	ug/L	71.067
Zn	64	1923.726496	2903353.128	ug/L	73.994
Cu	65	1853.232585	2920039.323	ug/L	87.098
Zn	66	1919.551850	1685381.681	ug/L	70.172
Zn	68	1933.391924	1183400.490	ug/L	77.144
Ge	72		99304.773	ug/L	
As	75	1941.037890	1841626.837	ug/L	42.042
Se	82	1952.071717	235878.710	ug/L	22.836
ArCl	77		161963.879	ug/L	
Br	79		811.036	ug/L	

Br	81		17730.608	ug/L	
Y	89		304969.752	ug/L	
Mo	95	1998.361917	5645057.716	ug/L	18.331
Rh	103		333615.611	ug/L	
Ag	107	1781.223742	17133630.964	ug/L	74.809
Ag	109	1823.790168	16789455.002	ug/L	94.085
Cd	111	1989.126101	4595166.541	ug/L	58.151
Cd	114	1951.218381	10606228.308	ug/L	58.152
In	115		419371.232	ug/L	
Sb	121	2036.565918	14554881.429	ug/L	57.817
Sb	123	2024.342296	11139889.480	ug/L	70.977
Ba	137	2010.627423	7758364.562	ug/L	55.229
Ba	138	1994.412303	49940474.108	ug/L	71.088
Tb	159		585550.919	ug/L	
Ho	165		603549.711	ug/L	
Hg	200	0.051131	142.668	ug/L	0.000
Hg	202	0.047923	170.002	ug/L	0.002
Tl	205	2009.153892	63000456.543	ug/L	67.929
Pb	208	1977.772279	87408598.302	ug/L	58.627
Bi	209		591363.303	ug/L	
Se	77	1787.091214	158417.064	ug/L	14.187
Se	78	1773.101863	527446.236	ug/L	17.401

QC Calculated Values

	Analyte	QC Std % Recovery	Int Std % Recovery
	Li		
	Be		
	B		
	B		
	C		
	Na		
	Mg		
	Mg		
	Al		
	Si		
	P		
	S		
	Cl		
	K		
	Ca		
>	Sc		90.206
	Ti		
	Ti		
	V		
	ClO		
	Cr		
	Cr		
	Fe		
	Mn		
	Fe		

Fe	
Co	
Ni	
Ni	
Cu	
Zn	
Cu	
Zn	
Zn	
> Ge	87.160
As	
Se	
ArCl	
Br	
Br	
Y	
Mo	
Rh	
Ag	
Ag	
Cd	
Cd	
> In	88.618
Sb	
Sb	
Ba	
Ba	
Tb	
> Ho	92.629
Hg	
Hg	
Tl	
Pb	
Bi	
Se	
Se	

Sample ID: 5ppm LR
Sample Date/Time: Wednesday, June 08, 2016 17:20:39
Autosampler Position: 156
Sample Description:
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\5ppm LR.73434

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		9908.067	ug/L	
Be	9	5384.648429	972890.262	ug/L	6.144
B	10	2.359713	153.668	ug/L	0.115
B	11	0.460784	312.339	ug/L	0.013
C	12		465761.433	ug/L	
Na	23	5163.172696	19649515.225	ug/L	193.643
Mg	24	4914.816523	13561584.823	ug/L	1.455
Mg	25	4874.999649	1952121.259	ug/L	88.605
Al	27	5066.918429	22078745.856	ug/L	38.450
Si	28		36128.412	ug/L	
P	31	-0.377357	6282.172	ug/L	1.017
S	32		46508052.861	ug/L	
Cl	35		5231727.330	ug/L	
K	39	5000.635632	28199969.115	ug/L	55.046
Ca	44	4847.299738	1013977.600	ug/L	83.584
Sc	45		122440.391	ug/L	
Ti	47	0.386254	257.337	ug/L	0.030
Ti	48	3.950017	20996.827	ug/L	0.114
V	51	4871.072927	31335602.964	ug/L	63.454
ClO	51		33009565.012	ug/L	
Cr	52	4927.825770	26383835.983	ug/L	81.448
Cr	53	4843.297207	3124221.449	ug/L	109.433
Fe	54	5036.885204	2202886.265	ug/L	144.944
Mn	55	4913.411012	41386908.949	ug/L	48.448
Fe	56	5012.738182	35987026.097	ug/L	11.299
Fe	57	4902.538640	832985.048	ug/L	81.900
Co	59	4696.036568	29521175.784	ug/L	49.227
Ni	60	4704.008942	6187436.744	ug/L	53.683
Ni	62	4700.027087	924940.536	ug/L	18.478
Cu	63	4423.673835	13610421.189	ug/L	69.621
Zn	64	4765.564795	6585472.321	ug/L	59.073
Cu	65	4528.993598	6534695.188	ug/L	34.361
Zn	66	4917.664506	3953173.027	ug/L	4.656
Zn	68	4997.431851	2800732.894	ug/L	62.589
Ge	72		93165.680	ug/L	
As	75	4868.222776	4332872.506	ug/L	159.158
Se	82	4670.566916	529353.990	ug/L	138.984
ArCl	77		369171.789	ug/L	
Br	79		1082.064	ug/L	

Br	81		16209.441	ug/L	
Y	89		278170.149	ug/L	
Mo	95	4954.369163	13128238.800	ug/L	104.489
Rh	103		308575.356	ug/L	
Ag	107	4371.039801	38898449.232	ug/L	67.815
Ag	109	4409.982797	37562635.058	ug/L	101.763
Cd	111	4966.952850	10614326.273	ug/L	65.227
Cd	114	4869.519660	24485423.363	ug/L	76.536
In	115		387830.581	ug/L	
Sb	121	5166.475325	34155861.487	ug/L	26.055
Sb	123	5211.168325	26528993.331	ug/L	59.787
Ba	137	5110.148726	18240200.280	ug/L	35.445
Ba	138	5086.013138	117816791.250	ug/L	63.479
Tb	159		552711.950	ug/L	
Ho	165		577823.487	ug/L	
Hg	200	0.097469	243.670	ug/L	0.011
Hg	202	0.100773	323.339	ug/L	0.002
Tl	205	4923.209483	147802819.878	ug/L	179.356
Pb	208	4843.985734	204958803.384	ug/L	166.529
Bi	209		582502.999	ug/L	
Se	77	4098.899060	362576.291	ug/L	36.644
Se	78	4020.996066	1184053.072	ug/L	52.128

QC Calculated Values

	Analyte	QC Std % Recovery	Int Std % Recovery
	Li		
	Be		
	B		
	B		
	C		
	Na		
	Mg		
	Mg		
	Al		
	Si		
	P		
	S		
	Cl		
	K		
	Ca		
>	Sc		82.569
	Ti		
	Ti		
	V		
	ClO		
	Cr		
	Cr		
	Fe		
	Mn		
	Fe		

Fe	
Co	
Ni	
Ni	
Cu	
Zn	
Cu	
Zn	
Zn	
> Ge	81.772
As	
Se	
ArCl	
Br	
Br	
Y	
Mo	
Rh	
Ag	
Ag	
Cd	
Cd	
> In	81.953
Sb	
Sb	
Ba	
Ba	
Tb	
> Ho	88.680
Hg	
Hg	
Tl	
Pb	
Bi	
Se	
Se	

Sample ID: 5ppm LRC
Sample Date/Time: Monday, June 06, 2016 17:18:03
Autosampler Position: 22
Sample Description: same source
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\5ppm LRC.73019

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		9145.944	ug/L	
Be	9	5249.050448	1049518.468	ug/L	241.686
B	10	2.066950	165.001	ug/L	0.111
B	11	0.216586	320.672	ug/L	0.093
C	12		510662.398	ug/L	
Na	23	4946.909951	21657450.062	ug/L	304.697
Mg	24	4918.650933	15132598.860	ug/L	224.000
Mg	25	4889.548566	2188392.193	ug/L	226.178
Al	27	4694.256346	24037258.826	ug/L	218.190
Si	28		36606.923	ug/L	
P	31	1.715768	7699.928	ug/L	1.829
S	32		48389264.384	ug/L	
Cl	35		5955225.390	ug/L	
K	39	4767.492743	31519510.641	ug/L	97.922
Ca	44	4848.133345	1167714.846	ug/L	200.242
Sc	45		138920.473	ug/L	
Ti	47	0.330110	272.004	ug/L	0.008
Ti	48	3.579844	21788.981	ug/L	0.285
V	51	4666.636572	34037306.194	ug/L	204.179
ClO	51		35775420.431	ug/L	
Cr	52	4559.463360	28505656.595	ug/L	228.973
Cr	53	4608.965580	3408898.829	ug/L	196.883
Fe	54	4890.012792	2395613.129	ug/L	324.399
Mn	55	4660.040802	44931828.598	ug/L	206.618
Fe	56	4703.692898	39041858.602	ug/L	271.709
Fe	57	4766.200391	938391.215	ug/L	219.555
Co	59	4431.614843	32151710.073	ug/L	160.634
Ni	60	4513.555487	6683344.301	ug/L	201.381
Ni	62	4562.426874	1030918.469	ug/L	223.924
Cu	63	4243.872576	14634803.019	ug/L	185.850
Zn	64	4521.810865	7039327.842	ug/L	161.578
Cu	65	4284.571632	7080809.412	ug/L	152.731
Zn	66	4598.788791	4220924.748	ug/L	152.179
Zn	68	4811.732752	3045314.837	ug/L	84.549
Ge	72		99638.006	ug/L	
As	75	4831.808060	4663732.783	ug/L	183.670
Se	82	4674.453173	581637.615	ug/L	197.761
ArCl	77		407344.138	ug/L	
Br	79		1101.400	ug/L	

Br	81		16791.827	ug/L	
Y	89		299883.649	ug/L	
Mo	95	4665.687940	13832547.769	ug/L	164.259
Rh	103		321900.473	ug/L	
Ag	107	4410.460731	41957167.499	ug/L	181.992
Ag	109	4444.590002	40306684.800	ug/L	188.199
Cd	111	4752.070214	11300178.208	ug/L	149.829
Cd	114	4744.328805	26358741.695	ug/L	111.381
In	115		425189.480	ug/L	
Sb	121	4976.195246	36859877.149	ug/L	143.668
Sb	123	4940.023890	28224086.562	ug/L	179.709
Ba	137	4859.523425	19549317.340	ug/L	127.381
Ba	138	4907.468231	127427851.552	ug/L	152.955
Tb	159		603858.387	ug/L	
Ho	165		625074.631	ug/L	
Hg	200	0.068523	197.335	ug/L	0.009
Hg	202	0.070724	258.004	ug/L	0.005
Tl	205	4773.914839	159696725.486	ug/L	92.937
Pb	208	4655.883394	221571814.967	ug/L	91.333
Bi	209		615196.006	ug/L	
Se	77	4701.298839	399210.314	ug/L	8.541
Se	78	4501.392536	1288370.472	ug/L	5.537

QC Calculated Values

Analyte	QC Std % Recovery	Int Std % Recovery
Li		
Be		
B		
B		
C		
Na		
Mg		
Mg		
Al		
Si		
P		
S		
Cl		
K		
Ca		
Sc		94.885
Ti		
Ti		
V		
ClO		
Cr		
Cr		
Fe		
Mn		
Fe		

Fe	
Co	
Ni	
Ni	
Cu	
Zn	
Cu	
Zn	
Zn	
> Ge	94.496
As	
Se	
ArCl	
Br	
Br	
Y	
Mo	
Rh	
Ag	
Ag	
Cd	
Cd	
> In	91.180
Sb	
Sb	
Ba	
Ba	
Tb	
> Ho	93.828
Hg	
Hg	
Tl	
Pb	
Bi	
Se	
Se	

Sample ID: 50ppm Min LRC
Sample Date/Time: Monday, June 06, 2016 17:24:34
Autosampler Position: 23
Sample Description: same source
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\50ppm Min LRC.73020

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		7752.638	ug/L	
Be	9	0.167053	38.000	ug/L	0.054
B	10	0.056819	54.000	ug/L	0.095
B	11	0.113729	284.004	ug/L	0.029
C	12		268724.000	ug/L	
Na	23	45959.786479	196168172.032	ug/L	2515.239
Mg	24	45299.780549	135934219.629	ug/L	1947.556
Mg	25	45949.356230	20055893.249	ug/L	2427.702
Al	27	45200.398638	225716412.299	ug/L	2362.415
Si	28		28223.754	ug/L	
P	31	44816.617929	11415804.602	ug/L	1991.783
S	32		50860659.913	ug/L	
Cl	35		3811983.002	ug/L	
K	39	45922.354622	292319310.826	ug/L	2518.194
Ca	44	45281.322455	10574088.811	ug/L	1336.504
Sc	45		135496.029	ug/L	
Ti	47	122.650401	71302.542	ug/L	4.671
Ti	48	37.522959	226615.696	ug/L	5.593
V	51	-1.939406	18848.185	ug/L	0.081
ClO	51		19861.676	ug/L	
Cr	52	0.484860	8816.140	ug/L	0.072
Cr	53	-6.316561	6150.080	ug/L	0.093
Fe	54	45947.860575	21697551.066	ug/L	1910.805
Mn	55	0.112198	11068.785	ug/L	0.178
Fe	56	45734.930602	359661872.843	ug/L	1742.332
Fe	57	46122.626712	8811568.726	ug/L	2060.277
Co	59	0.387907	2899.463	ug/L	0.026
Ni	60	1.592045	2328.965	ug/L	0.080
Ni	62	0.544593	159.335	ug/L	0.018
Cu	63	0.750488	2592.703	ug/L	0.039
Zn	64	1.302321	2469.782	ug/L	0.103
Cu	65	0.451311	757.698	ug/L	0.055
Zn	66	0.950553	1146.406	ug/L	0.008
Zn	68	0.882975	814.370	ug/L	0.025
Ge	72		103506.525	ug/L	
As	75	0.694238	299.535	ug/L	0.048
Se	82	0.065532	6.115	ug/L	0.028
ArCl	77		451.678	ug/L	
Br	79		821.037	ug/L	

Br	81		16760.771	ug/L	
Y	89		322400.433	ug/L	
Mo	95	3.962734	12204.611	ug/L	0.773
Rh	103		333204.545	ug/L	
Ag	107	13.943091	138201.398	ug/L	0.742
Ag	109	13.848636	130851.803	ug/L	0.726
Cd	111	0.167479	508.014	ug/L	0.021
Cd	114	0.170211	1187.411	ug/L	0.014
In	115		442500.852	ug/L	
Sb	121	2.764749	21388.151	ug/L	0.209
Sb	123	2.735562	16324.356	ug/L	0.216
Ba	137	0.322529	1388.773	ug/L	0.022
Ba	138	0.322300	8888.902	ug/L	0.025
Tb	159		631947.528	ug/L	
Ho	165		651870.695	ug/L	
Hg	200	0.005702	38.667	ug/L	0.000
Hg	202	0.007766	44.667	ug/L	0.005
Tl	205	0.221187	9540.021	ug/L	0.032
Pb	208	0.268334	14930.152	ug/L	0.015
Bi	209		596374.143	ug/L	
Se	77	-5.366183	396.009	ug/L	0.245
Se	78	-2.864856	7605.076	ug/L	0.890

QC Calculated Values

Analyte	QC Std % Recovery	Int Std % Recovery
Li		
Be		
B		
B		
C		
Na		
Mg		
Mg		
Al		
Si		
P		
S		
Cl		
K		
Ca		
> Sc		92.546
Ti		
Ti		
V		
ClO		
Cr		
Cr		
Fe		
Mn		
Fe		

Fe	
Co	
Ni	
Ni	
Cu	
Zn	
Cu	
Zn	
Zn	
> Ge	98.165
As	
Se	
ArCl	
Br	
Br	
Y	
Mo	
Rh	
Ag	
Ag	
Cd	
Cd	
> In	94.893
Sb	
Sb	
Ba	
Ba	
Tb	
> Ho	97.850
Hg	
Hg	
Tl	
Pb	
Bi	
Se	
Se	

METALS 200.8/6020

Summary Tables

Internal Standard Summary **EAI SDG(s) 163786 12/16/2016**

Sample ID	Description	Date/Time of Analysis	Sc %R	Ge %R	In %R	Ho %R
Blank.92292	0	Friday, December 16, 2016 14:25:44	0	0	0	0
Standard 1.92293	0	Friday, December 16, 2016 14:32:13	0	0	0	0
Standard 2.92294	0	Friday, December 16, 2016 14:38:42	0	0	0	0
Standard 3.92295	0	Friday, December 16, 2016 14:45:12	0	0	0	0
Standard 4.92296	0	Friday, December 16, 2016 14:51:43	0	0	0	0
Standard 5.92297	0	Friday, December 16, 2016 14:58:13	0	0	0	0
Standard 6.92298	0	Friday, December 16, 2016 15:04:44	0	0	0	0
Standard 7.92299	0	Friday, December 16, 2016 15:11:15	0	0	0	0
Standard 8.92300	0	Friday, December 16, 2016 15:17:47	0	0	0	0
Standard 9.92301	0	Friday, December 16, 2016 15:24:17	0	0	0	0
QC Std 1.92302	0	Friday, December 16, 2016 15:30:47	95.0	94.4	96.6	95.8
QC Std 2.92303	0	Friday, December 16, 2016 15:37:16	95.9	95.7	96.9	97.1
QC Std 3.92304	0	Friday, December 16, 2016 15:43:45	94.4	94.5	96.3	95.9
QC Std 5.92305	0	Friday, December 16, 2016 15:50:14	95.8	95.8	97.8	97.7
QC Std 6.92306	0	Friday, December 16, 2016 15:56:44	95.2	97.0	95.8	96.3
LLCS.92308	0.05 ppb Hg	Friday, December 16, 2016 16:09:42	96.5	97.6	100.0	98.0
LLCS.92309	50ppb Min + 0.1ppb TM	Friday, December 16, 2016 16:16:11	98.3	98.7	100.3	98.2
LLCS.92310	10ppb Min + 0.1ppb TM	Friday, December 16, 2016 16:22:40	97.8	98.8	99.1	97.8
ICSA.92311	0	Friday, December 16, 2016 16:29:10	96.9	103.9	95.1	94.9
ICSAB.92312	0	Friday, December 16, 2016 16:35:39	97.5	103.3	94.3	95.1
BLK.92314	12/12/16 A	Friday, December 16, 2016 16:48:40	98.3	98.3	98.8	95.7
filter BLK.92315	12/12/16 A	Friday, December 16, 2016 16:55:12	99.9	99.7	101.1	97.9
Ag LCS.92316	12/12/16 A	Friday, December 16, 2016 17:01:42	98.6	99.1	98.7	95.0
LCS.92317	12/12/16 A	Friday, December 16, 2016 17:08:11	95.8	95.6	93.7	94.3
QC Std 1.92320	0	Friday, December 16, 2016 17:27:39	93.7	95.1	95.4	94.4
QC Std 2.92321	0	Friday, December 16, 2016 17:34:09	95.6	95.6	96.5	95.4
QC Std 5.92322	0	Friday, December 16, 2016 17:40:36	95.3	95.3	97.3	94.5
QC Std 6.92323	0	Friday, December 16, 2016 17:47:06	97.3	98.5	96.0	95.6
163786.01.92325	0	Friday, December 16, 2016 18:00:04	100.0	100.4	101.7	99.2
163786.02.92326	0	Friday, December 16, 2016 18:06:33	98.9	98.8	99.3	96.1
163786.04.92327	0	Friday, December 16, 2016 18:13:03	103.6	95.3	94.9	94.4
163786.05.92328	0	Friday, December 16, 2016 18:19:34	105.0	97.8	96.6	95.1
163786.06.92329	0	Friday, December 16, 2016 18:26:05	108.2	99.3	99.0	96.4
163786.03.92330	0	Friday, December 16, 2016 18:32:35	107.4	98.7	97.1	96.2
163786.03 MS.92331	0	Friday, December 16, 2016 18:39:07	105.3	97.9	96.4	96.3
163786.03 MSD.92332	0	Friday, December 16, 2016 18:45:38	102.9	96.6	95.8	96.4
QC Std 1.92334	0	Friday, December 16, 2016 18:58:37	94.5	94.5	96.6	95.6
QC Std 2.92335	0	Friday, December 16, 2016 19:05:07	93.1	94.3	95.9	94.4
QC Std 5.92336	0	Friday, December 16, 2016 19:11:36	92.2	95.3	95.9	95.2
QC Std 6.92337	0	Friday, December 16, 2016 19:18:05	92.1	93.6	91.9	90.8

Blank Summary **EAI SDG(s) 163786** **Metals** **12/16/2016**

Sample ID: QC Std 1
Sample Date/Time: Friday, December 16, 2016 15:30:47
Sample Description: Blank
Dataset File: C:\Elandata\Dataset\default\QC Std 1.92302

Concentration Results

Analyte	Mass	Conc.	Units	Int Std % R	RL
Ag	107	0.002712	ug/L		< 1
Ag	109	0.002767	ug/L		< 1
Al	27	0.545776	ug/L		< 50
As	75	-0.142027	ug/L		< 1
Ba	137	0.01593	ug/L		< 1
Be	9	-0.008673	ug/L		< 1
Ca	44	-0.425411	ug/L		< 50
Cd	111	-0.013063	ug/L		< 1
Cd	114	-0.009051	ug/L		< 1
Co	59	-0.006889	ug/L		< 1
Cr	52	-0.040235	ug/L		< 1
Cu	63	0.010999	ug/L		< 1
Cu	65	0.00699	ug/L		< 1
Fe	54	-4.035027	ug/L		< 50
Fe	56	-4.903351	ug/L		< 50
Fe	57	-1.880885	ug/L		< 50
Ge	72		ug/L	94.369	
Hg	200	0.002485	ug/L		< 0.1
Hg	202	-0.000623	ug/L		< 0.1
Ho	165		ug/L	95.787	
In	115		ug/L	96.57	
K	39	1.284816	ug/L		< 50
Mg	24	0.227556	ug/L		< 50
Mg	25	0.213267	ug/L		< 50
Mn	55	-0.030751	ug/L		< 5
Na	23	-0.895229	ug/L		< 5000
Ni	60	0.000755	ug/L		< 1
Ni	62	0.066366	ug/L		< 1
P	31	0.876608	ug/L		< 50
Pb	208	0.0432	ug/L		< 1
Sb	121	-0.000075	ug/L		< 1
Sb	123	0.000818	ug/L		< 1
Sc	45		ug/L	94.972	
Se	82	0.011707	ug/L		< 1
Tl	205	0.005768	ug/L		< 1
V	51	0.376428	ug/L		< 1
Zn	64	0.052284	ug/L		< 5
Zn	66	0.085923	ug/L		< 5
Zn	68	-0.021137	ug/L		< 5

Sample ID: QC Std 1
Sample Date/Time: Friday, December 16, 2016 17:27:39
Sample Description: Blank
Dataset File: C:\Elandata\Dataset\default\QC Std 1.92320

Concentration Results

Analyte	Mass	Conc.	Units	Int Std % R	RL
Ag	107	0.019219	ug/L		< 1
Ag	109	0.014624	ug/L		< 1
Al	27	0.439115	ug/L		< 50
As	75	-0.124026	ug/L		< 1
Ba	137	0.00755	ug/L		< 1
Be	9	0.002815	ug/L		< 1
Ca	44	1.53306	ug/L		< 50
Cd	111	-0.007793	ug/L		< 1
Cd	114	-0.008053	ug/L		< 1
Co	59	-0.003431	ug/L		< 1
Cr	52	-0.018312	ug/L		< 1
Cu	63	0.019576	ug/L		< 1
Cu	65	0.025121	ug/L		< 1
Fe	54	-3.147571	ug/L		< 50
Fe	56	-5.334487	ug/L		< 50
Fe	57	-3.528544	ug/L		< 50
Ge	72		ug/L	95.129	
Hg	200	0.001616	ug/L		< 0.1
Hg	202	0.003332	ug/L		< 0.1
Ho	165		ug/L	94.365	
In	115		ug/L	95.354	
K	39	1.460737	ug/L		< 50
Mg	24	0.127907	ug/L		< 50
Mg	25	0.260409	ug/L		< 50
Mn	55	-0.033141	ug/L		< 5
Na	23	-1.470566	ug/L		< 5000
Ni	60	0.004036	ug/L		< 1
Ni	62	0.05815	ug/L		< 1
P	31	-1.409271	ug/L		< 50
Pb	208	0.047794	ug/L		< 1
Sb	121	0.027953	ug/L		< 1
Sb	123	0.027452	ug/L		< 1
Sc	45		ug/L	93.738	
Se	82	0.04207	ug/L		< 1
Tl	205	0.019449	ug/L		< 1
V	51	0.317684	ug/L		< 1
Zn	64	0.049809	ug/L		< 5
Zn	66	0.08951	ug/L		< 5
Zn	68	0.503541	ug/L		< 5

Sample ID:	QC Std 1
Sample Date/Time:	Friday, December 16, 2016 18:58:37
Sample Description:	Blank
Dataset File:	C:\Elandata\Dataset\default\QC Std 1.92334

Concentration Results

Analyte	Mass	Conc.	Units	Int Std % R	RL
Ag	107	0.045539	ug/L		< 1
Ag	109	0.0412	ug/L		< 1
Al	27	0.484725	ug/L		< 50
As	75	-0.103192	ug/L		< 1
Ba	137	0.015135	ug/L		< 1
Be	9	0.013608	ug/L		< 1
Ca	44	-0.58387	ug/L		< 50
Cd	111	-0.000877	ug/L		< 1
Cd	114	-0.002265	ug/L		< 1
Co	59	0.00883	ug/L		< 1
Cr	52	-0.019209	ug/L		< 1
Cu	63	0.044896	ug/L		< 1
Cu	65	0.049654	ug/L		< 1
Fe	54	-2.15798	ug/L		< 50
Fe	56	-3.507119	ug/L		< 50
Fe	57	-2.413707	ug/L		< 50
Ge	72		ug/L	94.538	
Hg	200	0.006147	ug/L		< 0.1
Hg	202	0.004226	ug/L		< 0.1
Ho	165		ug/L	95.564	
In	115		ug/L	96.595	
K	39	-0.058156	ug/L		< 50
Mg	24	0.163695	ug/L		< 50
Mg	25	0.155338	ug/L		< 50
Mn	55	-0.021736	ug/L		< 5
Na	23	0.942994	ug/L		< 5000
Ni	60	0.016495	ug/L		< 1
Ni	62	-0.001778	ug/L		< 1
P	31	0.096049	ug/L		< 50
Pb	208	0.046935	ug/L		< 1
Sb	121	0.063911	ug/L		< 1
Sb	123	0.068117	ug/L		< 1
Sc	45		ug/L	94.451	
Se	82	-0.115037	ug/L		< 1
Tl	205	0.054813	ug/L		< 1
V	51	0.2643	ug/L		< 1
Zn	64	0.050615	ug/L		< 5
Zn	66	0.108735	ug/L		< 5
Zn	68	0.530495	ug/L		< 5

Calibration Verification (CV) Summary **EAI SDG(s) 163786** **Metals** **12/16/2016**

Sample ID: QC Std 2
Sample Date/Time: Friday, December 16, 2016 15:37:16
Sample Description: Trace Metals
Dataset File: C:\Elandata\Dataset\default\QC Std 2.92303

Concentration Results

Analyte	Mass	Conc.	Units	QC Std % R	Int Std % R	True Value
As	75	100.406863	ug/L	101.115		100
Ba	137	100.075003	ug/L	100.175		100
Be	9	97.816642	ug/L	97.719		100
Cd	111	98.752589	ug/L	98.555		100
Cd	114	99.087695	ug/L	98.89		100
Co	59	98.772059	ug/L	97.988		100
Cr	52	97.355953	ug/L	97.259		100
Cu	63	97.650893	ug/L	97.553		100
Cu	65	98.866434	ug/L	98.768		100
Ge	72		ug/L		95.733	
Hg	200	1.003858	ug/L	100.386		1
Hg	202	1.00042	ug/L	100.042		1
Ho	165		ug/L		97.139	
In	115		ug/L		96.896	
K	39	974.281217	ug/L	97.526		1000
Mn	55	96.864856	ug/L	96.672		100
Ni	60	101.032098	ug/L	100.931		100
Ni	62	103.199221	ug/L	103.096		100
Pb	208	99.491926	ug/L	99.791		100
Sb	121	100.065047	ug/L	100.165		100
Sb	123	100.095586	ug/L	100.196		100
Sc	45		ug/L		95.886	
Se	82	100.511897	ug/L	99.714		100
Tl	205	104.42625	ug/L	105.802		100
V	51	95.422365	ug/L	95.806		100
Zn	64	99.707877	ug/L	99.509		100
Zn	66	99.297623	ug/L	99.099		100
Zn	68	99.672934	ug/L	99.474		100

Sample ID: QC Std 2
Sample Date/Time: Friday, December 16, 2016 17:34:09
Sample Description: Trace Metals
Dataset File: C:\Elandata\Dataset\default\QC Std 2.92321

Concentration Results

Analyte	Mass	Conc.	Units	QC Std % R	Int Std % R	True Value
As	75	102.55381	ug/L	103.277		100
Ba	137	100.883403	ug/L	100.984		100
Be	9	101.340501	ug/L	101.239		100
Cd	111	100.922787	ug/L	100.721		100
Cd	114	100.873853	ug/L	100.673		100
Co	59	99.714266	ug/L	98.923		100
Cr	52	98.438052	ug/L	98.34		100
Cu	63	99.300243	ug/L	99.201		100
Cu	65	100.38124	ug/L	100.281		100
Ge	72		ug/L		95.609	
Hg	200	1.024504	ug/L	102.45		1
Hg	202	1.004268	ug/L	100.427		1
Ho	165		ug/L		95.393	
In	115		ug/L		96.522	
K	39	986.963728	ug/L	98.795		1000
Mn	55	98.087424	ug/L	97.892		100
Ni	60	102.108642	ug/L	102.007		100
Ni	62	103.794363	ug/L	103.691		100
Pb	208	101.095209	ug/L	101.399		100
Sb	121	102.020445	ug/L	102.123		100
Sb	123	102.099342	ug/L	102.202		100
Sc	45		ug/L		95.636	
Se	82	104.381248	ug/L	103.553		100
Tl	205	106.360092	ug/L	107.761		100
V	51	96.342093	ug/L	96.729		100
Zn	64	101.287625	ug/L	101.085		100
Zn	66	100.765277	ug/L	100.564		100
Zn	68	101.593371	ug/L	101.391		100

Sample ID: QC Std 6
Sample Date/Time: Friday, December 16, 2016 15:56:44
Sample Description: Minerals
Dataset File: C:\Elandata\Dataset\default\QC Std 6.92306

Concentration Results

Analyte	Mass	Conc.	Units	QC Std % R	Int Std % R	True Value
Al	27	9490.16209	ug/L	94.902		10000
Ca	44	9493.2747	ug/L	94.933		10000
Fe	54	10044.3889	ug/L	100.444		10000
Fe	56	9403.83277	ug/L	94.038		10000
Fe	57	9306.32077	ug/L	93.063		10000
Ge	72		ug/L		97.023	
Ho	165		ug/L		96.311	
In	115		ug/L		95.78	
K	39	9563.51277	ug/L	95.635		10000
Mg	24	9715.72137	ug/L	97.157		10000
Mg	25	10396.8753	ug/L	103.969		10000
Na	23	9589.15359	ug/L	95.892		10000
P	31	9887.9047	ug/L	98.879		10000
Sc	45		ug/L		95.19	

Sample ID: QC Std 6
Sample Date/Time: Friday, December 16, 2016 17:47:06
Sample Description: Minerals
Dataset File: C:\Elandata\Dataset\default\QC Std 6.92323

Concentration Results

Analyte	Mass	Conc.	Units	QC Std % R	Int Std % R	True Value
Al	27	9475.5345	ug/L	94.755		10000
Ca	44	9523.89611	ug/L	95.239		10000
Fe	54	9930.1378	ug/L	99.301		10000
Fe	56	9326.47937	ug/L	93.265		10000
Fe	57	9224.75297	ug/L	92.248		10000
Ge	72		ug/L		98.541	
Ho	165		ug/L		95.601	
In	115		ug/L		96.034	
K	39	9597.80665	ug/L	95.978		10000
Mg	24	9744.51458	ug/L	97.445		10000
Mg	25	10231.0437	ug/L	102.31		10000
Na	23	9613.03961	ug/L	96.13		10000
P	31	9839.70287	ug/L	98.397		10000
Sc	45		ug/L		97.303	

Sample ID: QC Std 2
Sample Date/Time: Friday, December 16, 2016 19:05:07
Sample Description: Trace Metals
Dataset File: C:\Elandata\Dataset\default\QC Std 2.92335

Concentration Results

Analyte	Mass	Conc.	Units	QC Std % R	Int Std % R	True Value
As	75	104.282546	ug/L	105.018		100
Ba	137	102.777564	ug/L	102.88		100
Be	9	100.349954	ug/L	100.25		100
Cd	111	102.110628	ug/L	101.907		100
Cd	114	102.415619	ug/L	102.211		100
Co	59	103.338994	ug/L	102.519		100
Cr	52	102.323931	ug/L	102.222		100
Cu	63	102.150656	ug/L	102.049		100
Cu	65	103.243114	ug/L	103.14		100
Ge	72		ug/L		94.267	
Hg	200	1.044665	ug/L	104.466		1
Hg	202	1.018748	ug/L	101.875		1
Ho	165		ug/L		94.413	
In	115		ug/L		95.856	
K	39	1002.08712	ug/L	100.309		1000
Mn	55	101.295487	ug/L	101.093		100
Ni	60	104.93232	ug/L	104.827		100
Ni	62	106.847715	ug/L	106.741		100
Pb	208	102.78456	ug/L	103.094		100
Sb	121	103.572314	ug/L	103.676		100
Sb	123	103.12262	ug/L	103.226		100
Sc	45		ug/L		93.056	
Se	82	103.911095	ug/L	103.086		100
Tl	205	108.162523	ug/L	109.587		100
V	51	99.700505	ug/L	100.101		100
Zn	64	103.755875	ug/L	103.549		100
Zn	66	103.711801	ug/L	103.505		100
Zn	68	105.563051	ug/L	105.352		100

Sample ID: QC Std 6
Sample Date/Time: Friday, December 16, 2016 19:18:05
Sample Description: Minerals
Dataset File: C:\Elandata\Dataset\default\QC Std 6.92337

Concentration Results

Analyte	Mass	Conc.	Units	QC Std % R	Int Std % R	True Value
Al	27	10102.752	ug/L	101.028		10000
Ca	44	10041.3445	ug/L	100.413		10000
Fe	54	10559.2862	ug/L	105.593		10000
Fe	56	9995.9923	ug/L	99.96		10000
Fe	57	9876.56459	ug/L	98.766		10000
Ge	72		ug/L		93.612	
Ho	165		ug/L		90.802	
In	115		ug/L		91.889	
K	39	10006.6849	ug/L	100.067		10000
Mg	24	10198.4605	ug/L	101.985		10000
Mg	25	10885.2599	ug/L	108.853		10000
Na	23	10049.5034	ug/L	100.495		10000
P	31	10389.4097	ug/L	103.894		10000
Sc	45		ug/L		92.119	

Sample ID: ICSA
Sample Date/Time: Friday, December 16, 2016 16:29:10
Sample Description:
Dataset File: C:\Elandata\Dataset\default\ICSA.92311

Concentration Results

Analyte	Mass	Conc.	Units	QC Std % R	Int Std % R	True Value
Ag	107	0.126654	ug/L			< 1
Ag	109	0.129008	ug/L			< 1
Al	27	47362.58	ug/L			50000
As	75	-0.2522	ug/L			< 1
Ba	137	0.745357	ug/L			< 1
Be	9	0.008401	ug/L			< 1
Ca	44	49931.88	ug/L			50000
Cd	111	0.006734	ug/L			< 1
Cd	114	0.009027	ug/L			< 1
Co	59	0.189448	ug/L			< 1
Cr	52	-0.30428	ug/L			< 1
Cu	63	1.67152	ug/L			1.67152
Cu	65	1.538495	ug/L			1.538495
Fe	54	47846.94	ug/L			50000
Fe	56	45472.86	ug/L			50000
Fe	57	48769.29	ug/L			50000
Ge	72		ug/L		103.892	
Hg	200	0.006676	ug/L			< 0.1
Hg	202	0.010977	ug/L			< 0.1
Ho	165		ug/L		94.902	
In	115		ug/L		95.076	
K	39	47319.31	ug/L			50000
Mg	24	47689.23	ug/L			50000
Mg	25	50098.67	ug/L			50000
Mn	55	0.139505	ug/L			< 5
Na	23	47685.99	ug/L			50000
Ni	60	1.433259	ug/L			1.433259
Ni	62	0.37547	ug/L			< 1
P	31	50593.92	ug/L			50000
Pb	208	0.160503	ug/L			< 1
Sb	121	0.238176	ug/L			< 1
Sb	123	0.23114	ug/L			< 1
Sc	45		ug/L		96.873	
Se	82	-0.24242	ug/L			< 1
Tl	205	-0.01063	ug/L			< 1
V	51	1.284112	ug/L			1.284112
Zn	64	4.915541	ug/L			4.915541
Zn	66	2.132958	ug/L			2.132958
Zn	68	1.518189	ug/L			1.518189

Sample ID: ICSAB
Sample Date/Time: Friday, December 16, 2016 16:35:39
Sample Description:
Dataset File: C:\Elandata\Dataset\default\ICSAB.92312

Concentration Results

Analyte	Mass	Conc.	Units	QC Std % R	Int Std % R	True Value
Ag	107	9.174162	ug/L	91.74162		10
Ag	109	9.098757	ug/L	90.98757		10
Al	27	47604.71	ug/L	95.20941		50000
As	75	8.946878	ug/L	89.46878		10
Ba	137	10.25115	ug/L	102.5115		10
Be	9	9.813472	ug/L	98.13472		10
Ca	44	50556.84	ug/L	101.1137		50000
Cd	111	9.404558	ug/L	94.04558		10
Cd	114	9.407061	ug/L	94.07061		10
Co	59	8.925672	ug/L	89.25672		10
Cr	52	8.48865	ug/L	84.8865		10
Cu	63	8.60581	ug/L	69.3429		10
Cu	65	8.653564	ug/L	71.15069		10
Fe	54	47853.23	ug/L	95.70646		50000
Fe	56	45569.16	ug/L	91.13832		50000
Fe	57	48934.32	ug/L	97.86864		50000
Ge	72		ug/L		103.252	
Hg	200	0.951566	ug/L	95.1566		1
Hg	202	0.94966	ug/L	94.966		1
Ho	165		ug/L		95.087	
In	115		ug/L		94.266	
K	39	48272.63	ug/L	96.54525		50000
Mg	24	47471.19	ug/L	94.94237		50000
Mg	25	50128.75	ug/L	100.2575		50000
Mn	55	9.024969	ug/L	90.24969		10
Na	23	47869.82	ug/L	95.73964		50000
Ni	60	9.66409	ug/L	82.30831		10
Ni	62	8.954057	ug/L	89.54057		10
P	31	50600.29	ug/L	101.2006		50000
Pb	208	8.900855	ug/L	89.00855		10
Sb	121	9.99996	ug/L	99.9996		10
Sb	123	9.955794	ug/L	99.55794		10
Sc	45		ug/L		97.481	
Se	82	9.131312	ug/L	91.31312		10
Tl	205	8.910792	ug/L	89.10792		10
V	51	10.34827	ug/L	90.64162		10
Zn	64	13.07402	ug/L	81.58475		10
Zn	66	10.22987	ug/L	80.9691		10
Zn	68	10.07466	ug/L	85.56474		10

Internal Standard Summary **EAI SDG(s) 163786 12/19/2016**

Sample ID	Description	Date/Time of Analysis	Sc %R	Ge %R	In %R	Ho %R
Blank.92526	0	Monday, December 19, 2016 14:12:15	0	0	0	0
Standard 1.92527	0	Monday, December 19, 2016 14:18:43	0	0	0	0
Standard 2.92528	0	Monday, December 19, 2016 14:25:13	0	0	0	0
Standard 3.92529	0	Monday, December 19, 2016 14:31:43	0	0	0	0
Standard 4.92530	0	Monday, December 19, 2016 14:38:14	0	0	0	0
Standard 5.92531	0	Monday, December 19, 2016 14:44:44	0	0	0	0
Standard 6.92532	0	Monday, December 19, 2016 14:51:15	0	0	0	0
Standard 7.92533	0	Monday, December 19, 2016 14:57:46	0	0	0	0
Standard 8.92534	0	Monday, December 19, 2016 15:04:18	0	0	0	0
Standard 9.92535	0	Monday, December 19, 2016 15:10:48	0	0	0	0
QC Std 1.92536	0	Monday, December 19, 2016 15:17:18	99.5	98.3	95.7	96.4
QC Std 2.92537	0	Monday, December 19, 2016 15:23:47	98.5	97.1	96.0	95.2
QC Std 3.92538	0	Monday, December 19, 2016 15:30:15	100.8	98.8	96.7	96.1
QC Std 5.92539	0	Monday, December 19, 2016 15:36:44	100.4	100.1	97.8	96.4
QC Std 6.92540	0	Monday, December 19, 2016 15:43:14	96.7	96.1	90.9	92.3
LLCS.92542	0.05 ppb Hg	Monday, December 19, 2016 15:56:12	102.6	99.9	96.5	96.5
LLCS.92543	50ppb Min + 0.1ppb TM	Monday, December 19, 2016 16:02:41	104.7	102.7	98.1	98.0
LLCS.92544	10ppb Min + 0.1ppb TM	Monday, December 19, 2016 16:09:10	104.6	100.9	98.8	97.1
ICSA.92545	0	Monday, December 19, 2016 16:15:40	103.3	106.5	97.1	100.1
ICSAB.92546	0	Monday, December 19, 2016 16:22:09	108.6	109.6	100.6	100.7
5ppm LRC-flush.92547	0	Monday, December 19, 2016 16:28:39	119.1	110.4	106.4	103.8
163786.04.92549	1:1 Na LR	Monday, December 19, 2016 16:41:41	115.8	106.8	101.1	99.3
163786.05.92550	1:1 Na LR	Monday, December 19, 2016 16:48:12	110.5	103.6	96.8	95.5
163786.03.92551	1:1 Na LR	Monday, December 19, 2016 16:54:43	109.5	102.0	94.8	94.0
163786.03 MS.92552	1:1 Na LR pre	Monday, December 19, 2016 17:01:11	114.0	103.1	96.7	96.4
163786.03 MSD.92553	1:1 Na LR pre	Monday, December 19, 2016 17:07:40	112.2	101.0	96.2	97.1
QC Std 1.92556	0	Monday, December 19, 2016 17:27:08	109.2	101.2	97.7	97.4
QC Std 2.92557	0	Monday, December 19, 2016 17:33:37	106.3	99.6	94.7	94.2
QC Std 5.92558	0	Monday, December 19, 2016 17:40:05	108.4	99.8	95.7	95.9
QC Std 6.92559	0	Monday, December 19, 2016 17:46:35	109.4	102.1	95.4	96.0

Blank Summary **EAI SDG(s) 163786** **Metals** **12/19/2016**

Sample ID:	QC Std 1	Sample ID:	QC Std 1
Sample Date/Time:	Monday, December 19, 2016 15:17:18	Sample Date/Time:	Monday, December 19, 2016 17:27:08
Sample Description:	Blank	Sample Description:	Blank
Dataset File:	C:\Elandata\Dataset\default\QC Std 1.92536	Dataset File:	C:\Elandata\Dataset\default\QC Std 1.92556

Concentration Results				Int Std		Concentration Results				Int Std	
Analyte	Mass	Conc.	Units	% R	RL	Analyte	Mass	Conc.	Units	% R	RL
Ag	107	-0.015303	ug/L		< 1	Ag	107	-0.015489	ug/L		< 1
Ag	109	-0.01716	ug/L		< 1	Ag	109	-0.017658	ug/L		< 1
Al	27	0.098407	ug/L		< 50	Al	27	-0.141144	ug/L		< 50
As	75	0.022219	ug/L		< 1	As	75	0.079774	ug/L		< 1
Ba	137	-0.010578	ug/L		< 1	Ba	137	-0.009891	ug/L		< 1
Be	9	-0.00508	ug/L		< 1	Be	9	-0.004809	ug/L		< 1
Ca	44	-3.388715	ug/L		< 50	Ca	44	-2.506538	ug/L		< 50
Cd	111	-0.005199	ug/L		< 1	Cd	111	-0.006332	ug/L		< 1
Cd	114	-0.004991	ug/L		< 1	Cd	114	-0.006271	ug/L		< 1
Co	59	-0.008892	ug/L		< 1	Co	59	-0.011134	ug/L		< 1
Cr	52	0.066434	ug/L		< 1	Cr	52	0.024805	ug/L		< 1
Cu	63	0.014369	ug/L		< 1	Cu	63	0.015241	ug/L		< 1
Cu	65	0.010886	ug/L		< 1	Cu	65	0.016553	ug/L		< 1
Fe	54	-2.173649	ug/L		< 50	Fe	54	-4.672787	ug/L		< 50
Fe	56	2.944022	ug/L		< 50	Fe	56	-10.009904	ug/L		< 50
Fe	57	4.199148	ug/L		< 50	Fe	57	2.373643	ug/L		< 50
Ge	72		ug/L	98.305		Ge	72		ug/L	101.158	
Hg	200	0.00009	ug/L		< 0.1	Hg	200	0.001114	ug/L		< 0.1
Hg	202	0.001143	ug/L		< 0.1	Hg	202	0.000684	ug/L		< 0.1
Ho	165		ug/L	96.378		Ho	165		ug/L	97.369	
In	115		ug/L	95.723		In	115		ug/L	97.748	
K	39	0.548844	ug/L		< 50	K	39	-2.687059	ug/L		< 50
Mg	24	0.134386	ug/L		< 50	Mg	24	-0.071253	ug/L		< 50
Mg	25	0.057415	ug/L		< 50	Mg	25	-0.202677	ug/L		< 50
Mn	55	-0.105638	ug/L		< 5	Mn	55	-0.123823	ug/L		< 5
Na	23	-0.272264	ug/L		< 5000	Na	23	0.110467	ug/L		< 5000
Ni	60	-0.010904	ug/L		< 1	Ni	60	-0.009433	ug/L		< 1
Ni	62	-0.021905	ug/L		< 1	Ni	62	-0.036574	ug/L		< 1
P	31	-0.284141	ug/L		< 50	P	31	-0.864521	ug/L		< 50
Pb	208	-0.006333	ug/L		< 1	Pb	208	-0.006328	ug/L		< 1
Sb	121	-0.008095	ug/L		< 1	Sb	121	0.009887	ug/L		< 1
Sb	123	-0.005209	ug/L		< 1	Sb	123	0.011897	ug/L		< 1
Sc	45		ug/L	99.515		Sc	45		ug/L	109.194	
Se	82	-0.719251	ug/L		< 1	Se	82	-0.025588	ug/L		< 1
Tl	205	-0.015151	ug/L		< 1	Tl	205	0.002006	ug/L		< 1
V	51	0.074777	ug/L		< 1	V	51	-0.603136	ug/L		< 1
Zn	64	-0.012423	ug/L		< 5	Zn	64	-0.045094	ug/L		< 5
Zn	66	-0.011849	ug/L		< 5	Zn	66	-0.020409	ug/L		< 5
Zn	68	0.20885	ug/L		< 5	Zn	68	0.24532	ug/L		< 5

Sample ID: QC Std 2
Sample Date/Time: Monday, December 19, 2016 15:23:47
Sample Description: Trace Metals
Dataset File: C:\Elandata\Dataset\default\QC Std 2.92537

Concentration Results

Analyte	Mass	Conc.	Units	QC Std % R	Int Std % R	True Value
As	75	103.838451	ug/L	104.57		100
Ba	137	100.262176	ug/L	100.363		100
Be	9	99.883645	ug/L	99.784		100
Cd	111	99.316197	ug/L	99.118		100
Cd	114	99.589224	ug/L	99.39		100
Co	59	101.521391	ug/L	100.716		100
Cr	52	101.334171	ug/L	101.233		100
Cu	63	101.540941	ug/L	101.44		100
Cu	65	101.431152	ug/L	101.33		100
Ge	72		ug/L		97.143	
Hg	200	0.972533	ug/L	97.253		1
Hg	202	0.98942	ug/L	98.942		1
Ho	165		ug/L		95.186	
In	115		ug/L		95.982	
K	39	981.110464	ug/L	98.209		1000
Mn	55	100.505191	ug/L	100.305		100
Ni	60	103.124405	ug/L	103.021		100
Ni	62	102.903298	ug/L	102.8		100
Pb	208	100.220152	ug/L	100.522		100
Sb	121	100.369692	ug/L	100.47		100
Sb	123	101.409823	ug/L	101.511		100
Sc	45		ug/L		98.465	
Se	82	105.724717	ug/L	104.886		100
Tl	205	101.302394	ug/L	102.637		100
V	51	99.516758	ug/L	99.916		100
Zn	64	102.789337	ug/L	102.584		100
Zn	66	103.151051	ug/L	102.945		100
Zn	68	102.856797	ug/L	102.651		100

Sample ID: QC Std 2
Sample Date/Time: Monday, December 19, 2016 17:33:37
Sample Description: Trace Metals
Dataset File: C:\Elandata\Dataset\default\QC Std 2.92557

Concentration Results

Analyte	Mass	Conc.	Units	QC Std % R	Int Std % R	True Value
As	75	101.506358	ug/L	102.222		100
Ba	137	97.89429	ug/L	97.992		100
Be	9	97.049951	ug/L	96.953		100
Cd	111	97.952843	ug/L	97.757		100
Cd	114	98.014414	ug/L	97.819		100
Co	59	92.789951	ug/L	92.054		100
Cr	52	93.504602	ug/L	93.411		100
Cu	63	93.299435	ug/L	93.206		100
Cu	65	93.992278	ug/L	93.898		100
Ge	72		ug/L		99.633	
Hg	200	0.937507	ug/L	93.751		1
Hg	202	0.974801	ug/L	97.48		1
Ho	165		ug/L		94.162	
In	115		ug/L		94.718	
K	39	967.190444	ug/L	96.816		1000
Mn	55	94.418796	ug/L	94.23		100
Ni	60	93.795138	ug/L	93.701		100
Ni	62	93.817682	ug/L	93.724		100
Pb	208	98.441822	ug/L	98.738		100
Sb	121	99.088123	ug/L	99.187		100
Sb	123	99.168349	ug/L	99.268		100
Sc	45		ug/L		106.272	
Se	82	106.579241	ug/L	105.733		100
Tl	205	100.539408	ug/L	101.864		100
V	51	94.110186	ug/L	94.488		100
Zn	64	96.685914	ug/L	96.493		100
Zn	66	98.222166	ug/L	98.026		100
Zn	68	97.093479	ug/L	96.9		100

Sample ID: QC Std 6
Sample Date/Time: Monday, December 19, 2016 15:43:14
Sample Description: Minerals
Dataset File: C:\Elandata\Dataset\default\QC Std 6.92540

Concentration Results

Analyte	Mass	Conc.	Units	QC Std % R	Int Std % R	True Value
Al	27	9557.20926	ug/L	95.572		10000
Ca	44	9712.4393	ug/L	97.124		10000
Fe	54	9332.57956	ug/L	93.326		10000
Fe	56	9430.52967	ug/L	94.305		10000
Fe	57	9326.53038	ug/L	93.265		10000
Ge	72		ug/L		96.138	
Ho	165		ug/L		92.273	
In	115		ug/L		90.887	
K	39	9713.44904	ug/L	97.134		10000
Mg	24	9583.84122	ug/L	95.838		10000
Mg	25	9530.92999	ug/L	95.309		10000
Na	23	9641.68707	ug/L	96.417		10000
P	31	10014.9551	ug/L	100.15		10000
Sc	45		ug/L		96.718	

Sample ID: QC Std 6
Sample Date/Time: Monday, December 19, 2016 17:46:35
Sample Description: Minerals
Dataset File: C:\Elandata\Dataset\default\QC Std 6.92559

Concentration Results

Analyte	Mass	Conc.	Units	QC Std % R	Int Std % R	True Value
Al	27	9703.1385	ug/L	97.031		10000
Ca	44	9632.74377	ug/L	96.327		10000
Fe	54	8833.89695	ug/L	88.339		10000
Fe	56	8730.65284	ug/L	87.307		10000
Fe	57	9014.10736	ug/L	90.141		10000
Ge	72		ug/L		102.122	
Ho	165		ug/L		96.002	
In	115		ug/L		95.355	
K	39	9495.01505	ug/L	94.95		10000
Mg	24	9640.13624	ug/L	96.401		10000
Mg	25	9731.20582	ug/L	97.312		10000
Na	23	9612.9995	ug/L	96.13		10000
P	31	9887.4146	ug/L	98.874		10000
Sc	45		ug/L		109.356	

ICSA/ICSB **EAI SDG(s) 163786** **Metals** **12/19/2016**

Sample ID: ICSA
Sample Date/Time: Monday, December 19, 2016 16:15:40
Sample Description:
Dataset File: C:\Elandata\Dataset\default\ICSA.92545

Concentration Results				QC Std	Int Std	True
Analyte	Mass	Conc.	Units	% R	% R	Value
Ag	107	0.105937	ug/L			< 1
Ag	109	0.107191	ug/L			< 1
Al	27	43223.91	ug/L			50000
As	75	-0.06219	ug/L			< 1
Ba	137	0.705764	ug/L			< 1
Be	9	0.012554	ug/L			< 1
Ca	44	44591.62	ug/L			50000
Cd	111	0.011986	ug/L			< 1
Cd	114	0.009367	ug/L			< 1
Co	59	0.168834	ug/L			< 1
Cr	52	0.081862	ug/L			< 1
Cu	63	0.534103	ug/L			< 1
Cu	65	0.334125	ug/L			< 1
Fe	54	40945.59	ug/L			50000
Fe	56	40675.78	ug/L			50000
Fe	57	42049.6	ug/L			50000
Ge	72		ug/L		106.485	
Hg	200	0.008933	ug/L			< 0.1
Hg	202	0.006692	ug/L			< 0.1
Ho	165		ug/L		100.069	
In	115		ug/L		97.142	
K	39	43988.73	ug/L			50000
Mg	24	42319.99	ug/L			50000
Mg	25	42114.79	ug/L			50000
Mn	55	0.040834	ug/L			< 5
Na	23	43297.24	ug/L			50000
Ni	60	1.215807	ug/L			1.21581
Ni	62	0.767683	ug/L			< 1
P	31	43310.74	ug/L			50000
Pb	208	0.113617	ug/L			< 1
Sb	121	0.225426	ug/L			< 1
Sb	123	0.221613	ug/L			< 1
Sc	45		ug/L		103.284	
Se	82	-0.189	ug/L			< 1
Tl	205	-0.02632	ug/L			< 1
V	51	0.056518	ug/L			< 1
Zn	64	3.904401	ug/L			3.9044
Zn	66	1.221081	ug/L			< 5
Zn	68	0.379222	ug/L			< 5

Sample ID: ICSAB
Sample Date Monday, December 19, 2016 16:22:09
Sample Description:
Dataset File: C:\Elandata\Dataset\default\ICSAB.92546

Concentration Results				QC Std	Int Std	True
Analyte	Mass	Conc.	Units	% R	% R	Value
Ag	107	8.159392	ug/L	81.59392		10
Ag	109	8.084419	ug/L	80.84419		10
Al	27	43758.55	ug/L	87.5171		50000
As	75	8.60233	ug/L	86.0233		10
Ba	137	9.553874	ug/L	95.53874		10
Be	9	7.76713	ug/L	77.6713		10
Ca	44	44391.43	ug/L	88.78287		50000
Cd	111	8.516135	ug/L	85.16135		10
Cd	114	8.459906	ug/L	84.59906		10
Co	59	7.962528	ug/L	79.62528		10
Cr	52	8.253939	ug/L	82.53939		10
Cu	63	7.715626	ug/L	77.15626		10
Cu	65	7.607592	ug/L	76.07592		10
Fe	54	40963.49	ug/L	81.92699		50000
Fe	56	40405.77	ug/L	80.81154		50000
Fe	57	41142.7	ug/L	82.28541		50000
Ge	72		ug/L		109.645	
Hg	200	0.839152	ug/L	83.9152		1
Hg	202	0.846956	ug/L	84.6956		1
Ho	165		ug/L		100.716	
In	115		ug/L		100.573	
K	39	44106.78	ug/L	88.21356		50000
Mg	24	42888.08	ug/L	85.77616		50000
Mg	25	42459.92	ug/L	84.91985		50000
Mn	55	8.30664	ug/L	83.0664		10
Na	23	43578.47	ug/L	87.15694		50000
Ni	60	8.682603	ug/L	74.66796		10
Ni	62	8.788016	ug/L	87.88016		10
P	31	43886.39	ug/L	87.77277		50000
Pb	208	8.25374	ug/L	82.5374		10
Sb	121	9.09743	ug/L	90.9743		10
Sb	123	9.086822	ug/L	90.86822		10
Sc	45		ug/L		108.616	
Se	82	8.931111	ug/L	89.31111		10
Tl	205	8.317903	ug/L	83.17903		10
V	51	8.707809	ug/L	87.07809		10
Zn	64	12.32548	ug/L	84.2108		10
Zn	66	9.734045	ug/L	97.34045		10
Zn	68	9.183859	ug/L	91.83859		10

METALS 200.8/6020

Support Data

Sample/Batch Report

User Name: ICPMS1
Computer Name: TESLA
Sample File: C:\Elandata\Sample\AQUIRE_December162016.sam
Report Date/Time: Tuesday, December 20, 2016 13:06:26

A/S Loc.	Batch ID	Sample ID	Description	Sample Type	Init. Quant.	Prep. Vol.	Aliquot Vol.	Diluted Vol.	Solids Ratio
		Calibration Blank		Sample					
2		Hg0.1ppbCS		Sample					
3		Hg1.0ppbCS		Sample					
4		Hg5.0ppbCS		Sample					
9		TM.5ppbCS		Sample					
10		TM5ppbCS		Sample					
11		TM20ppbCS		Sample					
12		Min100CS		Sample					
13		Min1000CS		Sample					
14		Min5000CS		Sample					
5		Reagent Blank		Sample					
6		SCP_ICV		Sample					
15		ERA DWQC_ICV		Sample					
7		ERA WWQC_ICV		Sample					
8		MIN_ICV		Sample					
16		flush		Sample					
17		LLCS	0.05 ppb Hg	Sample					
18		LLCS	50ppb Min + 0.	Sample					
19		LLCS	10ppb Min + 0.	Sample					
20		ICSA		Sample					
21		ICSAB		Sample					
22		5ppm LRC-flush		Sample					
23		flush		Sample					
24		BLK	12/12/16 A	Sample					
25		filter BLK	12/12/16 A	Sample					
26		Ag LCS	12/12/16 A	Sample					
27		LCS	12/12/16 A	Sample					
28		flush		Sample					
29		flush		Sample					
30		flush		Sample					
31		163786.01		Sample					
32		163786.02		Sample					
33		163786.04		Sample					
34		163786.05		Sample					
35		163786.06		Sample					
36		163786.03		Sample					
37		163786.03 MS		Sample					
38		163786.03 MSD		Sample					
39		flush		Sample					
40		flush		Sample					
41		flush		Sample					
42		Soil BLK	1:25 Soltot	Sample					
43		Soil LCS	1:25 Soltot	Sample					
44		Soil QC	1:50 Soltot	Sample					
45		Soil Ag LCS	1:10 Soltot	Sample					
46		flush		Sample					
47		163938.01	1:25 Soltot	Sample					
48		163938.02	1:25 Soltot	Sample					
49		163938.03	1:25 Soltot	Sample					

50	163938.04	1:25 Soltot	Sample
51	163938.06	1:25 Soltot	Sample
52	163938.07	1:25 Soltot	Sample
53	163938.08	1:25 Soltot	Sample
54	163999.01	1:25 Soltot	Sample
55	163997.01	1:25 Soltot	Sample
56	163997.02	1:25 Soltot	Sample
57	163997.02 M1:25 Soltot pos		Sample
58	163997.02 M1:25 Soltot pos		Sample
59	flush		Sample
60	flush		Sample
61	flush		Sample
62	163918.01	1:25 Soltot	Sample
63	163984.01	1:25 Soltot	Sample
64	163984.02	1:25 Soltot	Sample
65	163984.03	1:25 Soltot	Sample
66	163984.04	1:25 Soltot	Sample
67	163984.05	1:25 Soltot	Sample
68	163984.06	1:25 Soltot	Sample
69	163984.07	1:25 Soltot	Sample
70	163984.08	1:25 Soltot	Sample
71	163984.08 M1:25 Soltot pre		Sample
72	163984.08 M1:25 Soltot pre		Sample
73	flush		Sample
74	flush		Sample
75	flush		Sample
76	BLK	12/16/2016	Sample
77	filter BLK		Sample
78	Ag LCS		Sample
79	LCS		Sample
80	LCS	1:1	Sample
81	LCS	1:5	Sample
82	flush		Sample
83	flush		Sample
84	flush		Sample
85	163977.02		Sample
86	163977.04		Sample
87	163972.02		Sample
88	163885.01		Sample
89	163885.02		Sample
90	163889.01		Sample
91	163940.01		Sample
92	163980.02		Sample
93	163996.01		Sample
94	163825.01		Sample
95	163825.01 MS		Sample
96	163825.01 MSD		Sample
97	flush		Sample
98	flush		Sample
99	flush		Sample
100	163865.01		Sample
101	163865.02		Sample
102	163865.03		Sample
103	163883.01		Sample
104	163883.02		Sample
105	163876.01		Sample
106	163876.02		Sample
107	163876.03		Sample
108	163876.04		Sample
109	163876.05		Sample

110	163876.05 MS	Sample
111	163876.05 MSD	Sample
112	flush	Sample
113	flush	Sample
114	flush	Sample
115	163860.01	Sample
116	163860.02	Sample
117	163860.03	Sample
118	163893.01	Sample
119	163895.01	Sample
120	163895.02	Sample
121	163897.01	Sample
122	163923.01	Sample
123	163923.02	Sample
124	163923.03	Sample
125	163923.03 MS	Sample
126	163923.03 MSD	Sample
127	flush	Sample
128	flush	Sample
129	flush	Sample
130	163896.01	Sample
131	163948.01	Sample
132	163950.01	Sample
133	163993.01	Sample
134	163993.02	Sample
135	163997.03	Sample
136	163997.04	Sample
137	163997.05	Sample
138	163997.06	Sample
139	163985.01	Sample
140	163985.01 MS	Sample
141	163985.01 MSD	Sample
142	flush	Sample
143	flush	Sample
144	flush	Sample
145	163995.04	Sample
146	163995.05	Sample
147	flush	Sample
148	163932.01 1:10 dig	Sample
149	163932.01	Sample
150	flush	Sample
151	163758.01 1:10	Sample
152	flush	Sample
153	163758.03 1:10	Sample
154	flush	Sample
155	flush	Sample
156		Sample
157		Sample
158		Sample
159		Sample
160		Sample

Sample/Batch Report

User Name: ICPMS1
Computer Name: TESLA
Sample File: C:\Elandata\Sample\AQUIRE_December192016.sam
Report Date/Time: Tuesday, December 20, 2016 13:06:05

A/S Loc.	Batch ID	Sample ID	Description	Sample Type	Init. Quant.	Prep. Vol.	Aliquot Vol.	Diluted Vol.	Solids Ratio
		Calibration Blank		Sample					
2		Hg0.1ppbCS		Sample					
3		Hg1.0ppbCS		Sample					
4		Hg5.0ppbCS		Sample					
9		TM.5ppbCS		Sample					
10		TM5ppbCS		Sample					
11		TM20ppbCS		Sample					
12		Min100CS		Sample					
13		Min1000CS		Sample					
14		Min5000CS		Sample					
5		Reagent Blank		Sample					
6		SCP_ICV		Sample					
15		ERA DWQC_ICV		Sample					
7		ERA WWQC_ICV		Sample					
8		MIN_ICV		Sample					
16		flush		Sample					
17		LLCS	0.05 ppb Hg	Sample					
18		LLCS	50ppb Min + 0.	Sample					
19		LLCS	10ppb Min + 0.	Sample					
20		ICSA		Sample					
21		ICSAB		Sample					
22		5ppm LRC-flush		Sample					
23		flush		Sample					
24		163786.04	1:1 Na LR	Sample					
25		163786.05	1:1 Na LR	Sample					
26		163786.03	1:1 Na LR	Sample					
27		163786.03 M	1:1 Na LR pre	Sample					
28		163786.03 M	1:1 Na LR pre	Sample					
29		flush		Sample					
30		flush		Sample					
31		flush		Sample					
32		Soil BLK	1:25 Soltot	Sample					
33		Soil LCS	1:25 Soltot	Sample					
34		Soil QC	1:50 Soltot	Sample					
35		Soil Ag LCS	1:10 Soltot	Sample					
36		flush		Sample					
37		163938.01	1:100 Soltot S(	Sample					
38		163984.03	1:100 Soltot S(	Sample					
39		163984.04	1:100 Soltot S(	Sample					
40		163984.06	1:100 Soltot S(	Sample					
41		163984.07	1:100 Soltot S(	Sample					
42		163997.01	1:50 Soltot Sc	Sample					
43		163997.02	1:50 Soltot Sc	Sample					
44		163997.02 M	1:50 Soltot Sc	Sample					
45		163997.02 M	1:50 Soltot Sc	Sample					
46		flush		Sample					
47		flush		Sample					
48		flush		Sample					
49		163999.02	1:25 Soltot As	Sample					

50	163912.01	1:12.5 Soltot ('	Sample
51	164002.01	1:100 Paintchi	Sample
52	flush		Sample
53	164022.01	1:25 Soltot	Sample
54	164022.02	1:25 Soltot	Sample
55	164022.03	1:50 Soltot Sc	Sample
56	164022.04	1:50 Soltot Sc	Sample
57	164022.05	1:50 Soltot Sc	Sample
58	164022.06	1:50 Soltot Sc	Sample
59	164022.08	1:50 Soltot Sc	Sample
60	164022.08 M	1:50 Soltot Sc	Sample
61	164022.08 M	1:50 Soltot Sc	Sample
62	flush		Sample
63	flush		Sample
64	flush		Sample
65	BLK	12/19/2016	Sample
66	filter BLK	12/19/2016	Sample
67	Ag LCS	12/19/2016	Sample
68	LCS	12/19/2016	Sample
69	LCS	1:1	Sample
70	LCS	1:5	Sample
71	flush		Sample
72	flush		Sample
73	flush		Sample
74	164031.01		Sample
75	164031.02		Sample
76	164031.03		Sample
77	164031.04		Sample
78	164681.01		Sample
79	164680.01		Sample
80	164680.02		Sample
81	164680.03		Sample
82	164680.04		Sample
83	164680.05		Sample
84	164680.05 Mpre		Sample
85	164680.05 Mpre		Sample
86	flush		Sample
87	flush		Sample
88	flush		Sample
89	163985.01	1:1 Na LR	Sample
90	164027.01	1:10 Cu	Sample
91	164027.02	1:10 Cu	Sample
92	164026.01		Sample
93	164006.01	1:1	Sample
94	164006.02	1:10 IS	Sample
95	164006.06	1:1	Sample
96	flush		Sample
97	163885.01	1:20 Sc mets	Sample
98	163885.02	1:20 Sc mets	Sample
99	flush		Sample
100	164007.03	1:100	Sample
101	164007.02	1:100 (1:10 of	Sample
102	164007.01	1:100 (1:10 of	Sample
103	flush		Sample
104	164007.03	1:10	Sample
105	flush		Sample
106	164007.02	1:10 dig	Sample
107	flush		Sample
108	164007.01	1:10 dig	Sample
109	flush		Sample

110	flush	Sample
111		Sample
112		Sample
113		Sample
114		Sample
115		Sample
116		Sample
117		Sample
118		Sample
119		Sample
120		Sample
121		Sample
122		Sample
123		Sample
124		Sample
125		Sample
126		Sample
127		Sample
128		Sample
129		Sample
130		Sample
131		Sample
132		Sample
133		Sample
134		Sample
135		Sample
136		Sample
137		Sample
138		Sample
139		Sample
140		Sample
141		Sample
142		Sample
143		Sample
144		Sample
145		Sample
146		Sample
147		Sample
148		Sample
149		Sample
150		Sample
151		Sample
152		Sample
153		Sample
154		Sample
155		Sample
156		Sample
157		Sample
158		Sample
159		Sample
160		Sample

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Friday, December 16, 2016 14:02:18
Sample Description:
Method File: C:\Elandata\Method\Daily.mth
Dataset File: C:\Elandata\DataSet\Stability\Daily Performance Check.178
Tuning File: C:\Elandata\Tuning\EPA.tun
Optimization File: C:\Elandata\Optimize\EPA.dac
Dual Detector Mode: Pulse
Acq. Dead Time(ns): 55
Current Dead Time (ns): 55

3.1x10^5 JM

Summary

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
Mg	24.0	20150.3	20150.308	160.497	0.8
Rh	102.9	153301.8	153301.780	443.993	0.3
In	114.9	205151.6	205151.572	345.758	0.2
Pb	208.0	179764.2	179764.158	766.765	0.4
U	238.1	455008.5	455008.505	2743.359	0.6
> Ba	137.9	200092.1	200092.086	658.001	0.3
Ba++	69.0	1011.3	0.005	0.000	2.4
> Ce	139.9	250875.2	250875.151	1155.230	0.5
CeO	155.9	6268.2	0.025	0.001	2.9
Bkgd	220.0	2.6	2.600	0.822	31.6

Current Optimization File Data

Current Value	Description
0.90	Nebulizer Gas Flow
10.00	Lens Voltage
1050.00	ICP RF Power
-2525.00	Analog Stage Voltage
1200.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-5.50	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset
0.00	Differential Aperture

2.08%

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	13	8.3	2655.4
Co	59	13	9.3	50142.9
In	115	13	10.3	211748.7

2.65%

SmartTune Wizard - Summary

_imization Summary

SmartTune file: C:\Elandata\Wizard\SmartTune\SmartTune Full.swz

Start Time: 12/16/2016 2:04:39 PM
End Time: 12/16/2016 2:07:26 PM

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (3.016/3.025), Target/Obtained resolution (0.65/0.676)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.65/0.665)
Target/Obtained mass (102.905/102.925), Target/Obtained resolution (0.65/0.659)
Target/Obtained mass (139.905/139.925), Target/Obtained resolution (0.65/0.663)
Target/Obtained mass (207.977/208.025), Target/Obtained resolution (0.65/0.673)

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Monday, December 19, 2016 12:26:30
Sample Description:
Method File: C:\Elandata\Method\Daily.mth
Dataset File: C:\Elandata\DataSet\Stability\Daily Performance Check.187
Tuning File: C:\Elandata\Tuning\EPA.tun
Optimization File: C:\Elandata\Optimize\EPA.dac
Dual Detector Mode: Pulse
Acq. Dead Time(ns): 55
Current Dead Time (ns): 55

changed cones
3.94x10^5
W

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	31144.3	31144.266	449.081	1.4
	Rh	102.9	240379.5	240379.544	2084.822	0.9
	In	114.9	319243.1	319243.118	3291.088	1.0
	Pb	208.0	291654.5	291654.496	2798.528	1.0
	U	238.1	614556.8	614556.772	9151.710	1.5
>	Ba	137.9	315138.9	315138.907	2479.002	0.8
	Ba++	69.0	1727.6	0.005	0.000	3.4
>	Ce	139.9	393866.1	393866.096	834.069	0.2
	CeO	155.9	11559.8	0.029	0.001	3.5
	Bkgd	220.0	3.5	3.500	1.696	48.4

Current Optimization File Data

Current Value	Description
0.93	Nebulizer Gas Flow
10.25	Lens Voltage
1050.00	ICP RF Power
-2525.00	Analog Stage Voltage
1200.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-5.50	AC Rod Offset

8904.8

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	15	8.3	3194.6
Co	59	15	9.5	87222.4
In	115	15	10.3	347449.1

8655.3

SmartTune Wizard - Summary

nization Summary

SmartTune file: C:\Elandata\Wizard\SmartTune\SmartTune Full.swz

Start Time: 12/19/2016 12:28:38 PM
End Time: 12/19/2016 12:36:59 PM

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (3.016/3.025), Target/Obtained resolution (0.65/0.657)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.65/0.651)
Target/Obtained mass (102.905/102.925), Target/Obtained resolution (0.65/0.647)
Target/Obtained mass (139.905/139.925), Target/Obtained resolution (0.65/0.646)
Target/Obtained mass (207.977/207.975), Target/Obtained resolution (0.65/0.650)

Sample ID: 163786.01
Sample Date/Time: Friday, December 16, 2016 18:00:04
Autosampler Position: 31
Sample Description:
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\163786.01.92325

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		9458.253	ug/L	
Be	9	-0.006103	2.667	ug/L	0.004
B	10	0.387426	127.001	ug/L	0.110
B	11	0.383313	653.357	ug/L	0.057
C	12		308642.517	ug/L	
Na	23	9.640158	55394.931	ug/L	0.336
Mg	24	0.434164	1620.145	ug/L	0.083
Mg	25	0.447148	210.002	ug/L	0.023
Al	27	1.881140	8230.402	ug/L	0.136
Si	28		879975.977	ug/L	
P	31	2.983318	3794.125	ug/L	1.026
S	32		29674208.046	ug/L	
Cl	35		5082169.030	ug/L	
K	39	-0.310338	265412.041	ug/L	1.249
Ca	44	3.221067	5148.137	ug/L	5.235
Sc	45		93930.830	ug/L	
Ti	47	0.064524	65.334	ug/L	0.003
Ti	48	0.070356	110.513	ug/L	0.015
V	51	0.415673	12624.427	ug/L	0.075
ClO	51		13414.223	ug/L	
Cr	52	0.311430	4427.873	ug/L	0.005
Cr	53	1.508959	4474.101	ug/L	0.054
Fe	54	3.255995	22889.138	ug/L	0.528
Mn	55	0.022787	717.028	ug/L	0.005
Fe	56	-2.985239	793070.588	ug/L	1.608
Fe	57	0.732869	3290.596	ug/L	0.358
Co	59	-0.006629	128.334	ug/L	0.002
Ni	60	0.172922	214.336	ug/L	0.002
Ni	62	0.221857	58.000	ug/L	0.012
Cu	63	0.034152	160.668	ug/L	0.006
Zn	64	0.304109	632.454	ug/L	0.028
Cu	65	0.037804	76.000	ug/L	0.003
Zn	66	0.333838	364.674	ug/L	0.037
Zn	68	0.557788	4285.677	ug/L	0.001
Ge	72		78454.442	ug/L	
As	75	-0.036399	217.443	ug/L	0.005
Se	82	0.131968	3.585	ug/L	0.168
ArCl	77		378.675	ug/L	
Br	79		1382.439	ug/L	

Br	81		11156.844	ug/L	
Y	89		220357.496	ug/L	
Mo	95	0.035418	105.001	ug/L	0.001
Rh	103		252098.457	ug/L	
Ag	107	0.021574	325.006	ug/L	0.008
Ag	109	0.017183	301.005	ug/L	0.008
Cd	111	-0.015613	10.333	ug/L	0.000
Cd	114	-0.011865	27.667	ug/L	0.002
In	115		317914.403	ug/L	
Sb	121	0.052185	385.342	ug/L	0.007
Sb	123	0.054728	304.412	ug/L	0.004
Ba	137	0.021597	128.668	ug/L	0.005
Ba	138	0.026029	821.242	ug/L	0.002
Tb	159		476536.190	ug/L	
Ho	165		492767.016	ug/L	
Hg	200	0.002212	13.333	ug/L	0.002
Hg	202	0.000861	14.333	ug/L	0.001
Tl	205	-0.011936	596.686	ug/L	0.002
Pb	208	0.108198	4171.719	ug/L	0.001
Bi	209		426728.013	ug/L	
Se	77	0.416357	357.007	ug/L	0.210
Se	78	0.770108	5170.636	ug/L	0.100

QC Calculated Values

Analyte	QC Std % Recovery	Int Std % Recovery
Li		
Be		
B		
B		
C		
Na		
Mg		
Mg		
Al		
Si		
P		
S		
Cl		
K		
Ca		
> Sc		99.986
Ti		
Ti		
V		
ClO		
Cr		
Cr		
Fe		
Mn		
Fe		

	Fe	
	Co	
	Ni	
	Ni	
	Cu	
	Zn	
	Cu	
	Zn	
	Zn	
>	Ge	100.361
	As	
	Se	
	ArCl	
	Br	
	Br	
	Y	
	Mo	
	Rh	
	Ag	
	Ag	
	Cd	
	Cd	
>	In	101.714
	Sb	
	Sb	
	Ba	
	Ba	
	Tb	
>	Ho	99.165
	Hg	
	Hg	
	Tl	
	Pb	
	Bi	
	Se	
	Se	

Sample ID: 163786.02
Sample Date/Time: Friday, December 16, 2016 18:06:33
Autosampler Position: 32
Sample Description:
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\163786.02.92326

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		9364.822	ug/L	
Be	9	0.001578	4.333	ug/L	0.010
B	10	0.132670	111.334	ug/L	0.037
B	11	0.105573	568.351	ug/L	0.125
C	12		286529.385	ug/L	
Na	23	-0.776416	16368.055	ug/L	0.147
Mg	24	0.366477	1426.780	ug/L	0.103
Mg	25	0.368302	180.002	ug/L	0.184
Al	27	2.774475	11447.203	ug/L	0.096
Si	28		838790.993	ug/L	
P	31	-1.293077	3073.855	ug/L	2.360
S	32		29805372.395	ug/L	
Cl	35		4988545.026	ug/L	
K	39	-0.155674	263075.532	ug/L	2.020
Ca	44	5.581857	5438.293	ug/L	1.032
Sc	45		92895.115	ug/L	
Ti	47	0.098808	78.334	ug/L	0.007
Ti	48	0.062219	75.502	ug/L	0.002
V	51	0.497379	12892.135	ug/L	0.104
ClO	51		13686.635	ug/L	
Cr	52	0.156499	3717.362	ug/L	0.041
Cr	53	1.346021	4336.034	ug/L	0.446
Fe	54	3.464679	22687.084	ug/L	3.011
Mn	55	-0.023069	420.676	ug/L	0.001
Fe	56	-3.136028	783131.686	ug/L	4.358
Fe	57	0.055097	3163.884	ug/L	0.738
Co	59	-0.008136	119.334	ug/L	0.000
Ni	60	0.326023	374.341	ug/L	0.031
Ni	62	0.284298	67.334	ug/L	0.010
Cu	63	0.055345	211.336	ug/L	0.003
Zn	64	0.234221	550.132	ug/L	0.024
Cu	65	0.050993	90.667	ug/L	0.001
Zn	66	0.257708	312.005	ug/L	0.007
Zn	68	0.698337	4299.350	ug/L	0.441
Ge	72		77263.145	ug/L	
As	75	0.019783	255.356	ug/L	0.048
Se	82	0.211775	9.609	ug/L	0.316
ArCl	77		347.673	ug/L	
Br	79		747.697	ug/L	

Br	81		10562.800	ug/L	
Y	89		216738.834	ug/L	
Mo	95	0.026890	86.000	ug/L	0.001
Rh	103		247926.477	ug/L	
Ag	107	0.005744	208.336	ug/L	0.001
Ag	109	0.001316	188.669	ug/L	0.001
Cd	111	-0.015828	9.667	ug/L	0.002
Cd	114	-0.012873	23.000	ug/L	0.000
In	115		310357.846	ug/L	
Sb	121	0.000814	89.667	ug/L	0.003
Sb	123	0.002723	71.661	ug/L	0.001
Ba	137	0.000419	61.667	ug/L	0.004
Ba	138	0.006214	417.607	ug/L	0.001
Tb	159		469117.099	ug/L	
Ho	165		477656.737	ug/L	
Hg	200	0.002486	13.333	ug/L	0.001
Hg	202	0.001041	14.333	ug/L	0.000
Tl	205	-0.012810	558.684	ug/L	0.002
Pb	208	0.133784	4875.513	ug/L	0.004
Bi	209		420281.690	ug/L	
Se	77	0.791079	378.008	ug/L	0.151
Se	78	0.476799	5121.700	ug/L	0.108

QC Calculated Values

	Analyte	QC Std % Recovery	Int Std % Recovery
	Li		
	Be		
	B		
	B		
	C		
	Na		
	Mg		
	Mg		
	Al		
	Si		
	P		
	S		
	Cl		
	K		
	Ca		
>	Sc		98.883
	Ti		
	Ti		
	V		
	ClO		
	Cr		
	Cr		
	Fe		
	Mn		
	Fe		

	Fe	
	Co	
	Ni	
	Ni	
	Cu	
	Zn	
	Cu	
	Zn	
	Zn	
>	Ge	98.837
	As	
	Se	
	ArCl	
	Br	
	Br	
	Y	
	Mo	
	Rh	
	Ag	
	Ag	
	Cd	
	Cd	
>	In	99.296
	Sb	
	Sb	
	Ba	
	Ba	
	Tb	
>	Ho	96.124
	Hg	
	Hg	
	Tl	
	Pb	
	Bi	
	Se	
	Se	

Sample ID: 163786.04
Sample Date/Time: Friday, December 16, 2016 18:13:03
Autosampler Position: 33
Sample Description:
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\163786.04.92327

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		9187.312	ug/L	
Be	9	-0.002110	3.667	ug/L	0.002
B	10	38.497744	2378.645	ug/L	1.529
B	11	39.883289	12156.794	ug/L	2.231
C	12		272603.854	ug/L	
Na	23	63746.448473	246150895.015	ug/L	2180.205
Mg	24	822.125744	2200077.022	ug/L	26.740
Mg	25	801.454661	284761.253	ug/L	22.904
Al	27	30.095031	118183.498	ug/L	1.419
Si	28		11956400.251	ug/L	
P	31	183.341146	33685.628	ug/L	3.159
S	32		29211681.133	ug/L	
Cl	35		4988074.275	ug/L	
K	39	1992.420343	9583481.340	ug/L	45.348
Ca	44	2018.814364	312238.317	ug/L	53.654
Sc	45		97287.236	ug/L	
Ti	47	2.883688	1242.419	ug/L	0.571
Ti	48	2.897065	12274.371	ug/L	0.084
V	51	0.813706	15167.013	ug/L	0.282
ClO	51		16108.641	ug/L	
Cr	52	1.105649	8118.955	ug/L	0.078
Cr	53	3.211342	5562.038	ug/L	0.839
Fe	54	37.315017	35177.622	ug/L	0.625
Mn	55	13.896251	92074.932	ug/L	0.245
Fe	56	25.327881	991744.217	ug/L	3.515
Fe	57	42.588382	9127.916	ug/L	3.553
Co	59	0.009657	220.336	ug/L	0.005
Ni	60	0.304146	368.341	ug/L	0.011
Ni	62	0.475491	102.334	ug/L	0.004
Cu	63	0.636251	1726.831	ug/L	0.008
Zn	64	0.359482	717.355	ug/L	0.028
Cu	65	0.113819	172.335	ug/L	0.002
Zn	66	0.215769	298.672	ug/L	0.004
Zn	68	0.370092	4347.706	ug/L	0.287
Ge	72		74502.827	ug/L	
As	75	2.633765	2064.032	ug/L	0.186
Se	82	-0.099049	-14.502	ug/L	0.025
ArCl	77		523.682	ug/L	
Br	79		6279.847	ug/L	

Br	81		15983.377	ug/L	
Y	89		207714.389	ug/L	
Mo	95	0.822886	1651.150	ug/L	0.046
Rh	103		229560.240	ug/L	
Ag	107	-0.006177	120.334	ug/L	0.003
Ag	109	-0.006366	131.334	ug/L	0.004
Cd	111	-0.014349	11.667	ug/L	0.000
Cd	114	-0.013309	20.333	ug/L	0.000
In	115		296634.000	ug/L	
Sb	121	0.004015	102.667	ug/L	0.005
Sb	123	0.004966	77.746	ug/L	0.003
Ba	137	4.271593	12366.740	ug/L	0.162
Ba	138	4.257482	79101.366	ug/L	0.165
Tb	159		457794.598	ug/L	
Ho	165		468933.020	ug/L	
Hg	200	0.175916	314.672	ug/L	0.017
Hg	202	0.127704	309.672	ug/L	0.012
Tl	205	-0.014680	506.014	ug/L	0.001
Pb	208	0.106375	3908.000	ug/L	0.006
Bi	209		390481.486	ug/L	
Se	77	3.449852	527.015	ug/L	1.489
Se	78	-0.887073	4894.148	ug/L	0.283

QC Calculated Values

	Analyte	QC Std % Recovery	Int Std % Recovery
	Li		
	Be		
	B		
	B		
	C		
	Na		
	Mg		
	Mg		
	Al		
	Si		
	P		
	S		
	Cl		
	K		
	Ca		
>	Sc		103.558
	Ti		
	Ti		
	V		
	ClO		
	Cr		
	Cr		
	Fe		
	Mn		
	Fe		

Fe	
Co	
Ni	
Ni	
Cu	
Zn	
Cu	
Zn	
Zn	
> Ge	95.306
As	
Se	
ArCl	
Br	
Br	
Y	
Mo	
Rh	
Ag	
Ag	
Cd	
Cd	
> In	94.906
Sb	
Sb	
Ba	
Ba	
Tb	
> Ho	94.369
Hg	
Hg	
Tl	
Pb	
Bi	
Se	
Se	

Sample ID: 163786.05
Sample Date/Time: Friday, December 16, 2016 18:19:34
Autosampler Position: 34
Sample Description:
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\163786.05.92328

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		9147.276	ug/L	
Be	9	0.005091	5.333	ug/L	0.006
B	10	39.266096	2457.666	ug/L	0.888
B	11	40.882536	12606.401	ug/L	2.593
C	12		276660.090	ug/L	
Na	23	63421.491202	247966403.979	ug/L	3939.205
Mg	24	827.260180	2240142.131	ug/L	67.129
Mg	25	811.245363	291536.045	ug/L	76.017
Al	27	30.862678	122618.200	ug/L	2.592
Si	28		12184515.632	ug/L	
P	31	184.963062	34371.521	ug/L	12.910
S	32		29957246.904	ug/L	
Cl	35		5138576.039	ug/L	
K	39	1999.744562	9736648.623	ug/L	130.492
Ca	44	2008.246351	314425.085	ug/L	141.112
Sc	45		98671.032	ug/L	
Ti	47	2.523966	1107.734	ug/L	0.182
Ti	48	3.050539	13080.825	ug/L	0.295
V	51	1.201514	17467.451	ug/L	0.056
ClO	51		18604.369	ug/L	
Cr	52	0.237987	4312.704	ug/L	0.046
Cr	53	3.704597	5916.260	ug/L	0.209
Fe	54	29.720877	32999.466	ug/L	7.747
Mn	55	13.684098	91729.561	ug/L	1.177
Fe	56	20.421351	973736.984	ug/L	11.966
Fe	57	34.248211	8090.265	ug/L	3.454
Co	59	0.006944	208.002	ug/L	0.003
Ni	60	0.434609	519.682	ug/L	0.033
Ni	62	0.714514	144.001	ug/L	0.033
Cu	63	0.631180	1734.499	ug/L	0.044
Zn	64	0.782017	1209.065	ug/L	0.041
Cu	65	0.098131	155.335	ug/L	0.003
Zn	66	0.551967	529.682	ug/L	0.090
Zn	68	0.601953	4515.788	ug/L	0.481
Ge	72		76447.371	ug/L	
As	75	2.641020	2116.443	ug/L	0.381
Se	82	0.189814	8.145	ug/L	0.024
ArCl	77		667.691	ug/L	
Br	79		7190.190	ug/L	

Br	81		17144.825	ug/L	
Y	89		213305.697	ug/L	
Mo	95	0.720011	1484.121	ug/L	0.052
Rh	103		233304.684	ug/L	
Ag	107	0.023232	320.339	ug/L	0.001
Ag	109	0.022651	322.339	ug/L	0.004
Cd	111	-0.011696	16.000	ug/L	0.005
Cd	114	-0.010706	30.667	ug/L	0.000
In	115		301865.521	ug/L	
Sb	121	0.001975	94.000	ug/L	0.001
Sb	123	0.004316	76.740	ug/L	0.002
Ba	137	4.139566	12174.815	ug/L	0.319
Ba	138	4.232110	79874.840	ug/L	0.316
Tb	159		459557.786	ug/L	
Ho	165		472590.886	ug/L	
Hg	200	0.174400	314.005	ug/L	0.024
Hg	202	0.125732	307.672	ug/L	0.006
Tl	205	-0.015076	499.014	ug/L	0.003
Pb	208	0.105088	3895.331	ug/L	0.007
Bi	209		390807.645	ug/L	
Se	77	6.203833	681.359	ug/L	0.959
Se	78	0.225881	5079.836	ug/L	0.817

QC Calculated Values

Analyte	QC Std % Recovery	Int Std % Recovery
Li		
Be		
B		
B		
C		
Na		
Mg		
Mg		
Al		
Si		
P		
S		
Cl		
K		
Ca		
> Sc		105.031
Ti		
Ti		
V		
ClO		
Cr		
Cr		
Fe		
Mn		
Fe		

	Fe	
	Co	
	Ni	
	Ni	
	Cu	
	Zn	
	Cu	
	Zn	
	Zn	
>	Ge	97.794
	As	
	Se	
	ArCl	
	Br	
	Br	
	Y	
	Mo	
	Rh	
	Ag	
	Ag	
	Cd	
	Cd	
>	In	96.579
	Sb	
	Sb	
	Ba	
	Ba	
	Tb	
>	Ho	95.105
	Hg	
	Hg	
	Tl	
	Pb	
	Bi	
	Se	
	Se	

Sample ID: 163786.06
Sample Date/Time: Friday, December 16, 2016 18:26:05
Autosampler Position: 35
Sample Description:
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\163786.06.92329

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		9714.523	ug/L	
Be	9	-0.008442	2.333	ug/L	0.006
B	10	7.071261	549.350	ug/L	0.171
B	11	7.268938	2797.764	ug/L	0.196
C	12		286635.459	ug/L	
Na	23	11729.828174	47337301.426	ug/L	211.121
Mg	24	6512.921741	18205880.564	ug/L	74.286
Mg	25	6934.554631	2573581.668	ug/L	100.221
Al	27	15.917744	65888.052	ug/L	0.846
Si	28		14104598.566	ug/L	
P	31	55.359416	13129.476	ug/L	2.603
S	32		32411400.902	ug/L	
Cl	35		5182632.765	ug/L	
K	39	2644.710269	13193381.182	ug/L	62.881
Ca	44	24453.180418	3894796.037	ug/L	335.808
Sc	45		101619.549	ug/L	
Ti	47	1.412974	658.691	ug/L	0.041
Ti	48	10.673847	47769.152	ug/L	0.308
V	51	0.818783	15884.866	ug/L	0.035
ClO	51		16921.735	ug/L	
Cr	52	0.112160	3862.131	ug/L	0.029
Cr	53	2.499521	5405.607	ug/L	0.366
Fe	54	176.128598	85576.538	ug/L	5.838
Mn	55	120.032820	826001.643	ug/L	2.802
Fe	56	154.685852	1849354.988	ug/L	6.573
Fe	57	216.924947	34435.118	ug/L	10.601
Co	59	0.024602	313.339	ug/L	0.000
Ni	60	0.856254	1026.725	ug/L	0.045
Ni	62	0.205843	60.000	ug/L	0.016
Cu	63	0.163940	525.349	ug/L	0.002
Zn	64	1.673020	2295.042	ug/L	0.007
Cu	65	0.131678	203.002	ug/L	0.002
Zn	66	1.333371	1094.733	ug/L	0.057
Zn	68	1.095170	4903.989	ug/L	0.176
Ge	72		77634.079	ug/L	
As	75	13.106262	9751.487	ug/L	0.106
Se	82	0.808906	58.508	ug/L	0.072
ArCl	77		643.689	ug/L	
Br	79		25396.138	ug/L	

Br	81		36018.570	ug/L	
Y	89		216180.185	ug/L	
Mo	95	0.565993	1194.078	ug/L	0.019
Rh	103		238434.412	ug/L	
Ag	107	0.683342	4867.970	ug/L	0.002
Ag	109	0.678371	4671.200	ug/L	0.018
Cd	111	-0.006124	26.000	ug/L	0.001
Cd	114	-0.003282	60.667	ug/L	0.000
In	115		309423.113	ug/L	
Sb	121	0.019645	194.335	ug/L	0.003
Sb	123	0.023011	159.287	ug/L	0.003
Ba	137	6.273149	18925.346	ug/L	0.014
Ba	138	6.360827	123189.588	ug/L	0.011
Tb	159		466196.938	ug/L	
Ho	165		479268.975	ug/L	
Hg	200	0.016400	38.333	ug/L	0.005
Hg	202	0.014707	47.000	ug/L	0.001
Tl	205	-0.014387	525.016	ug/L	0.004
Pb	208	0.106158	3988.676	ug/L	0.005
Bi	209		408690.151	ug/L	
Se	77	5.014200	614.687	ug/L	0.168
Se	78	0.088616	5056.935	ug/L	0.174

QC Calculated Values

	Analyte	QC Std % Recovery	Int Std % Recovery
	Li		
	Be		
	B		
	B		
	C		
	Na		
	Mg		
	Mg		
	Al		
	Si		
	P		
	S		
	Cl		
	K		
	Ca		
>	Sc		108.170
	Ti		
	Ti		
	V		
	ClO		
	Cr		
	Cr		
	Fe		
	Mn		
	Fe		

	Fe	
	Co	
	Ni	
	Ni	
	Cu	
	Zn	
	Cu	
	Zn	
	Zn	
>	Ge	99.312
	As	
	Se	
	ArCl	
	Br	
	Br	
	Y	
	Mo	
	Rh	
	Ag	
	Ag	
	Cd	
	Cd	
>	In	98.997
	Sb	
	Sb	
	Ba	
	Ba	
	Tb	
>	Ho	96.449
	Hg	
	Hg	
	Tl	
	Pb	
	Bi	
	Se	
	Se	

Sample ID: 163786.03
Sample Date/Time: Friday, December 16, 2016 18:32:35
Autosampler Position: 36
Sample Description:
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\163786.03.92330

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		9645.114	ug/L	
Be	9	0.025369	10.333	ug/L	0.012
B	10	37.303409	2392.982	ug/L	0.614
B	11	39.029135	12345.044	ug/L	1.084
C	12		299221.904	ug/L	
Na	23	60130.444930	240599627.220	ug/L	2230.328
Mg	24	1166.345338	3233724.559	ug/L	48.340
Mg	25	1157.354134	425992.378	ug/L	51.518
Al	27	910.682376	3668366.045	ug/L	50.547
Si	28		10865922.151	ug/L	
P	31	317.502167	57833.380	ug/L	11.612
S	32		31015190.927	ug/L	
Cl	35		5120992.116	ug/L	
K	39	3263.415106	16077280.164	ug/L	158.809
Ca	44	3799.032744	604409.401	ug/L	132.764
Sc	45		100852.804	ug/L	
Ti	47	58.498934	25338.932	ug/L	2.923
Ti	48	63.133296	280738.997	ug/L	7.634
V	51	2.692873	26009.822	ug/L	0.222
ClO	51		27212.668	ug/L	
Cr	52	3.089955	17562.051	ug/L	0.189
Cr	53	4.850067	6696.132	ug/L	0.452
Fe	54	1403.537309	513087.052	ug/L	71.912
Mn	55	27.181178	185976.038	ug/L	1.211
Fe	56	1422.609034	9741238.202	ug/L	67.234
Fe	57	1394.551211	200953.550	ug/L	74.447
Co	59	0.540680	3168.552	ug/L	0.022
Ni	60	2.074061	2424.323	ug/L	0.071
Ni	62	2.647378	481.346	ug/L	0.049
Cu	63	2.034862	5544.691	ug/L	0.061
Zn	64	6.309787	7689.381	ug/L	0.114
Cu	65	1.626610	2109.912	ug/L	0.046
Zn	66	5.735749	4145.945	ug/L	0.155
Zn	68	5.516290	7054.403	ug/L	0.347
Ge	72		77119.094	ug/L	
As	75	11.615741	8611.582	ug/L	0.172
Se	82	0.239311	12.171	ug/L	0.149
ArCl	77		593.686	ug/L	
Br	79		8534.017	ug/L	

Br	81		18546.913	ug/L	
Y	89		222404.868	ug/L	
Mo	95	1.424553	2938.808	ug/L	0.022
Rh	103		235490.885	ug/L	
Ag	107	-0.001046	158.335	ug/L	0.003
Ag	109	-0.002249	162.001	ug/L	0.005
Cd	111	0.008844	50.333	ug/L	0.006
Cd	114	0.009598	109.334	ug/L	0.001
In	115		303601.486	ug/L	
Sb	121	0.434646	2454.331	ug/L	0.008
Sb	123	0.430576	1884.602	ug/L	0.011
Ba	137	9.090251	26872.659	ug/L	0.216
Ba	138	9.203541	174692.715	ug/L	0.256
Tb	159		465431.461	ug/L	
Ho	165		478028.241	ug/L	
Hg	200	0.277819	502.347	ug/L	0.000
Hg	202	0.196950	481.013	ug/L	0.014
Tl	205	0.001843	895.044	ug/L	0.002
Pb	208	0.678569	22652.071	ug/L	0.014
Bi	209		393533.871	ug/L	
Se	77	4.740586	599.353	ug/L	0.118
Se	78	0.188505	5073.601	ug/L	0.107

QC Calculated Values

	Analyte	QC Std % Recovery	Int Std % Recovery
	Li		
	Be		
	B		
	B		
	C		
	Na		
	Mg		
	Mg		
	Al		
	Si		
	P		
	S		
	Cl		
	K		
	Ca		
>	Sc		107.354
	Ti		
	Ti		
	V		
	ClO		
	Cr		
	Cr		
	Fe		
	Mn		
	Fe		

	Fe	
	Co	
	Ni	
	Ni	
	Cu	
	Zn	
	Cu	
	Zn	
	Zn	
>	Ge	98.653
	As	
	Se	
	ArCl	
	Br	
	Br	
	Y	
	Mo	
	Rh	
	Ag	
	Ag	
	Cd	
	Cd	
>	In	97.135
	Sb	
	Sb	
	Ba	
	Ba	
	Tb	
>	Ho	96.199
	Hg	
	Hg	
	Tl	
	Pb	
	Bi	
	Se	
	Se	

Sample ID: 163786.03 MS
Sample Date/Time: Friday, December 16, 2016 18:39:07
Autosampler Position: 37
Sample Description:
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\163786.03 MS.92331

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		9199.320	ug/L	
Be	9	931.265919	215407.600	ug/L	22.189
B	10	38.082220	2395.649	ug/L	0.752
B	11	38.818560	12058.325	ug/L	0.100
C	12		746413.871	ug/L	
Na	23	68855.674054	270559714.767	ug/L	197.642
Mg	24	11197.172861	30485260.137	ug/L	152.546
Mg	25	11785.708850	4260204.604	ug/L	64.857
Al	27	10845.098874	42904433.047	ug/L	213.667
Si	28		10989156.606	ug/L	
P	31	9500.368448	1598155.190	ug/L	88.038
S	32		32273333.167	ug/L	
Cl	35		5944058.155	ug/L	
K	39	13186.915235	62957526.364	ug/L	25.917
Ca	44	14518.445766	2254300.207	ug/L	43.809
Sc	45		98965.093	ug/L	
Ti	47	79.208746	33687.643	ug/L	1.146
Ti	48	63.697355	278647.528	ug/L	1.282
V	51	937.586503	5052062.417	ug/L	7.887
ClO	51		5264128.251	ug/L	
Cr	52	917.974219	4161464.847	ug/L	9.026
Cr	53	843.331424	473832.587	ug/L	12.207
Fe	54	11681.067956	4026147.805	ug/L	143.223
Mn	55	955.040048	6397481.400	ug/L	1.810
Fe	56	11085.899794	68755105.731	ug/L	23.763
Fe	57	10791.575995	1504950.183	ug/L	170.553
Co	59	911.336798	4956251.937	ug/L	5.117
Ni	60	856.616044	970934.337	ug/L	7.284
Ni	62	882.933297	149651.466	ug/L	9.987
Cu	63	867.395114	2286949.788	ug/L	2.951
Zn	64	866.905075	993659.925	ug/L	9.437
Cu	65	836.066791	1048050.429	ug/L	3.373
Zn	66	872.766932	595707.918	ug/L	0.541
Zn	68	880.332697	432201.564	ug/L	4.616
Ge	72		76565.135	ug/L	
As	75	1018.711684	729060.407	ug/L	25.118
Se	82	1004.008554	80236.093	ug/L	23.126
ArCl	77		57442.914	ug/L	
Br	79		7245.891	ug/L	

Br	81		17251.356	ug/L	
Y	89		222298.823	ug/L	
Mo	95	1073.063922	2174146.106	ug/L	14.972
Rh	103		229890.588	ug/L	
Ag	107	52.543864	351919.162	ug/L	1.279
Ag	109	48.740915	314110.876	ug/L	4.964
Cd	111	978.294733	1600386.389	ug/L	15.894
Cd	114	1027.090246	3935541.609	ug/L	16.973
In	115		301151.092	ug/L	
Sb	121	1040.219536	5629322.098	ug/L	11.198
Sb	123	1037.562713	4365850.057	ug/L	13.346
Ba	137	1045.014092	3058561.137	ug/L	5.530
Ba	138	1055.348712	19843709.831	ug/L	9.786
Tb	159		466054.530	ug/L	
Ho	165		478309.779	ug/L	
Hg	200	1.292868	2306.293	ug/L	0.006
Hg	202	1.223933	2931.139	ug/L	0.025
Tl	205	989.876740	22778962.785	ug/L	5.933
Pb	208	975.597391	31849502.595	ug/L	4.838
Bi	209		404472.902	ug/L	
Se	77	997.884497	56258.879	ug/L	6.720
Se	78	1103.709742	189187.765	ug/L	10.132

QC Calculated Values

Analyte	QC Std % Recovery	Int Std % Recovery
Li		
Be		
B		
B		
C		
Na		
Mg		
Mg		
Al		
Si		
P		
S		
Cl		
K		
Ca		
> Sc		105.344
Ti		
Ti		
V		
ClO		
Cr		
Cr		
Fe		
Mn		
Fe		

Fe	
Co	
Ni	
Ni	
Cu	
Zn	
Cu	
Zn	
Zn	
> Ge	97.944
As	
Se	
ArCl	
Br	
Br	
Y	
Mo	
Rh	
Ag	
Ag	
Cd	
Cd	
> In	96.351
Sb	
Sb	
Ba	
Ba	
Tb	
> Ho	96.256
Hg	
Hg	
Tl	
Pb	
Bi	
Se	
Se	

Sample ID: 163786.03 MSD
Sample Date/Time: Friday, December 16, 2016 18:45:38
Autosampler Position: 38
Sample Description:
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\163786.03 MSD.92332

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		8574.709	ug/L	
Be	9	893.172811	201768.032	ug/L	21.892
B	10	37.136099	2284.287	ug/L	0.972
B	11	37.805613	11484.249	ug/L	0.299
C	12		712831.133	ug/L	
Na	23	68268.520673	261993305.547	ug/L	262.766
Mg	24	10798.408310	28713358.795	ug/L	42.891
Mg	25	11353.416569	4008198.957	ug/L	16.263
Al	27	10505.455114	40590911.885	ug/L	54.107
Si	28		10305291.451	ug/L	
P	31	9324.414173	1531998.637	ug/L	104.659
S	32		30713167.756	ug/L	
Cl	35		5748585.855	ug/L	
K	39	12963.586626	60452165.690	ug/L	16.694
Ca	44	14496.481263	2198370.586	ug/L	77.917
Sc	45		96656.453	ug/L	
Ti	47	71.088437	29532.226	ug/L	0.794
Ti	48	57.910371	247402.150	ug/L	0.119
V	51	941.333234	4953837.368	ug/L	2.537
ClO	51		5140587.837	ug/L	
Cr	52	921.804309	4081257.400	ug/L	8.956
Cr	53	837.330310	459499.533	ug/L	13.888
Fe	54	11494.027162	3869549.490	ug/L	100.085
Mn	55	948.245580	6203760.129	ug/L	3.474
Fe	56	10821.844170	65571251.439	ug/L	34.698
Fe	57	10628.769444	1447704.514	ug/L	25.189
Co	59	907.114992	4818199.978	ug/L	1.784
Ni	60	847.957006	938682.144	ug/L	8.963
Ni	62	867.651173	143628.078	ug/L	9.366
Cu	63	861.219452	2217695.550	ug/L	1.102
Zn	64	855.785664	958017.050	ug/L	8.979
Cu	65	827.480634	1013081.593	ug/L	3.873
Zn	66	861.619120	574374.496	ug/L	9.556
Zn	68	869.358068	416904.278	ug/L	5.080
Ge	72		75543.248	ug/L	
As	75	996.854294	704072.381	ug/L	1.653
Se	82	978.165560	77144.078	ug/L	4.558
ArCl	77		54872.439	ug/L	
Br	79		6848.918	ug/L	

Br	81		16075.871	ug/L	
Y	89		216707.168	ug/L	
Mo	95	993.664031	1986639.580	ug/L	6.783
Rh	103		227103.009	ug/L	
Ag	107	49.715123	331164.133	ug/L	1.155
Ag	109	48.900885	313577.992	ug/L	3.343
Cd	111	957.907561	1558749.451	ug/L	1.354
Cd	114	1010.375033	3850987.501	ug/L	5.992
In	115		299531.976	ug/L	
Sb	121	1028.434822	5535797.261	ug/L	13.204
Sb	123	1030.868926	4314559.366	ug/L	12.128
Ba	137	1038.653994	3023654.083	ug/L	5.780
Ba	138	1037.924224	19412071.586	ug/L	2.416
Tb	159		463046.469	ug/L	
Ho	165		479049.904	ug/L	
Hg	200	1.306588	2334.300	ug/L	0.017
Hg	202	1.205320	2891.126	ug/L	0.005
Tl	205	980.346022	22594325.123	ug/L	0.199
Pb	208	974.011127	31846486.529	ug/L	3.899
Bi	209		401996.125	ug/L	
Se	77	962.220151	54260.114	ug/L	2.742
Se	78	1058.319463	181614.741	ug/L	3.157

QC Calculated Values

Analyte	QC Std % Recovery	Int Std % Recovery
Li		
Be		
B		
B		
C		
Na		
Mg		
Mg		
Al		
Si		
P		
S		
Cl		
K		
Ca		
> Sc		102.887
Ti		
Ti		
V		
ClO		
Cr		
Cr		
Fe		
Mn		
Fe		

Fe	
Co	
Ni	
Ni	
Cu	
Zn	
Cu	
Zn	
Zn	
> Ge	96.637
As	
Se	
ArCl	
Br	
Br	
Y	
Mo	
Rh	
Ag	
Ag	
Cd	
Cd	
> In	95.833
Sb	
Sb	
Ba	
Ba	
Tb	
> Ho	96.405
Hg	
Hg	
Tl	
Pb	
Bi	
Se	
Se	

Sample ID: 163786.04
Sample Date/Time: Monday, December 19, 2016 16:41:41
Autosampler Position: 24
Sample Description: 1:1 Na LR
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\163786.04.92549

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		16448.200	ug/L	
Be	9	-0.002693	4.000	ug/L	0.003
B	10	18.546594	2285.287	ug/L	0.917
B	11	19.236855	11639.113	ug/L	0.566
C	12		405959.951	ug/L	
Na	23	32679.414683	213512233.473	ug/L	619.639
Mg	24	411.253799	1860194.629	ug/L	12.191
Mg	25	405.896270	259252.332	ug/L	16.544
Al	27	16.251404	110413.544	ug/L	0.882
Si	28		9608237.071	ug/L	
P	31	92.967324	32896.078	ug/L	2.026
S	32		42718157.355	ug/L	
Cl	35		7899722.654	ug/L	
K	39	1047.220776	9562859.905	ug/L	58.002
Ca	44	1041.629374	315619.285	ug/L	34.795
Sc	45		163584.208	ug/L	
Ti	47	1.206986	937.715	ug/L	0.045
Ti	48	1.427587	9592.441	ug/L	0.076
V	51	-0.554086	26816.847	ug/L	0.148
ClO	51		28793.569	ug/L	
Cr	52	0.561277	10366.848	ug/L	0.075
Cr	53	-1.618085	9604.409	ug/L	0.650
Fe	54	19.026846	48612.490	ug/L	2.449
Mn	55	6.968261	83763.586	ug/L	0.305
Fe	56	14.717094	1610674.000	ug/L	7.763
Fe	57	24.605570	11093.444	ug/L	3.416
Co	59	-0.002353	340.006	ug/L	0.000
Ni	60	0.135268	323.006	ug/L	0.007
Ni	62	0.303852	122.667	ug/L	0.035
Cu	63	0.362940	1965.880	ug/L	0.032
Zn	64	0.532134	1642.078	ug/L	0.061
Cu	65	0.037921	226.336	ug/L	0.008
Zn	66	0.465946	862.374	ug/L	0.016
Zn	68	1.008404	6515.001	ug/L	0.354
Ge	72		124318.014	ug/L	
As	75	1.496514	2663.317	ug/L	0.025
Se	82	-0.102960	-5.564	ug/L	0.015
ArCl	77		780.034	ug/L	
Br	79		6368.234	ug/L	

Br	81		21377.774	ug/L	
Y	89		367543.860	ug/L	
Mo	95	0.387457	1497.457	ug/L	0.010
Rh	103		390567.836	ug/L	
Ag	107	-0.026167	216.003	ug/L	0.001
Ag	109	-0.027290	189.002	ug/L	0.002
Cd	111	-0.005379	22.667	ug/L	0.001
Cd	114	-0.006715	43.000	ug/L	0.001
In	115		493948.784	ug/L	
Sb	121	-0.001703	95.334	ug/L	0.001
Sb	123	-0.000213	76.443	ug/L	0.001
Ba	137	2.034144	10512.742	ug/L	0.069
Ba	138	2.055670	68644.396	ug/L	0.119
Tb	159		710231.501	ug/L	
Ho	165		723772.693	ug/L	
Hg	200	0.084723	254.004	ug/L	0.002
Hg	202	0.066726	265.004	ug/L	0.004
Tl	205	-0.025388	1374.438	ug/L	0.004
Pb	208	0.050425	3902.669	ug/L	0.004
Bi	209		606993.012	ug/L	
Se	77	-2.183328	758.032	ug/L	0.209
Se	78	4.239952	8260.352	ug/L	0.427

QC Calculated Values

	Analyte	QC Std % Recovery	Int Std % Recovery
	Li		
	Be		
	B		
	B		
	C		
	Na		
	Mg		
	Mg		
	Al		
	Si		
	P		
	S		
	Cl		
	K		
	Ca		
>	Sc		115.807
	Ti		
	Ti		
	V		
	ClO		
	Cr		
	Cr		
	Fe		
	Mn		
	Fe		

	Fe	
	Co	
	Ni	
	Ni	
	Cu	
	Zn	
	Cu	
	Zn	
	Zn	
>	Ge	106.834
	As	
	Se	
	ArCl	
	Br	
	Br	
	Y	
	Mo	
	Rh	
	Ag	
	Ag	
	Cd	
	Cd	
>	In	101.128
	Sb	
	Sb	
	Ba	
	Ba	
	Tb	
>	Ho	99.328
	Hg	
	Hg	
	Tl	
	Pb	
	Bi	
	Se	
	Se	

Sample ID: 163786.05
Sample Date/Time: Monday, December 19, 2016 16:48:12
Autosampler Position: 25
Sample Description: 1:1 Na LR
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\163786.05.92550

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		15999.400	ug/L	
Be	9	-0.001214	4.333	ug/L	0.002
B	10	19.856763	2313.628	ug/L	2.074
B	11	20.780985	11881.761	ug/L	1.765
C	12		407506.558	ug/L	
Na	23	34102.699206	212125463.933	ug/L	2654.193
Mg	24	425.560439	1832265.252	ug/L	36.776
Mg	25	425.841863	258957.639	ug/L	34.591
Al	27	17.620283	113686.763	ug/L	1.557
Si	28		9407487.435	ug/L	
P	31	95.726054	32056.483	ug/L	11.952
S	32		40127661.468	ug/L	
Cl	35		7672793.132	ug/L	
K	39	1063.746583	9243313.834	ug/L	96.931
Ca	44	1071.579935	308740.840	ug/L	96.148
Sc	45		156049.937	ug/L	
Ti	47	1.201851	889.377	ug/L	0.104
Ti	48	1.507972	9701.962	ug/L	0.056
V	51	-0.604177	25109.317	ug/L	0.274
ClO	51		26742.639	ug/L	
Cr	52	0.088276	6464.961	ug/L	0.091
Cr	53	-2.121758	8709.840	ug/L	0.939
Fe	54	18.235720	45817.395	ug/L	5.854
Mn	55	7.246183	82847.928	ug/L	0.610
Fe	56	15.548676	1542406.449	ug/L	11.675
Fe	57	21.177350	9741.884	ug/L	2.281
Co	59	-0.002725	320.006	ug/L	0.004
Ni	60	0.233045	497.347	ug/L	0.028
Ni	62	0.332522	125.001	ug/L	0.060
Cu	63	0.354374	1833.185	ug/L	0.046
Zn	64	0.405095	1323.536	ug/L	0.056
Cu	65	0.039827	219.669	ug/L	0.006
Zn	66	0.345406	688.359	ug/L	0.059
Zn	68	0.953067	6162.421	ug/L	0.496
Ge	72		120512.740	ug/L	
As	75	1.395937	2457.413	ug/L	0.247
Se	82	-0.194117	-18.739	ug/L	0.335
ArCl	77		751.364	ug/L	
Br	79		6962.004	ug/L	

Br	81		21334.021	ug/L	
Y	89		353660.360	ug/L	
Mo	95	0.336530	1266.755	ug/L	0.023
Rh	103		372466.293	ug/L	
Ag	107	-0.012439	364.674	ug/L	0.000
Ag	109	-0.010331	368.674	ug/L	0.001
Cd	111	-0.007622	15.667	ug/L	0.001
Cd	114	-0.005556	48.333	ug/L	0.001
In	115		472571.714	ug/L	
Sb	121	-0.002523	84.667	ug/L	0.001
Sb	123	-0.002057	60.703	ug/L	0.000
Ba	137	2.129703	10518.417	ug/L	0.148
Ba	138	2.154344	68794.536	ug/L	0.136
Tb	159		676877.687	ug/L	
Ho	165		696123.513	ug/L	
Hg	200	0.085751	246.670	ug/L	0.008
Hg	202	0.067627	258.004	ug/L	0.003
Tl	205	-0.023006	1407.776	ug/L	0.005
Pb	208	0.059704	4235.720	ug/L	0.008
Bi	209		591326.110	ug/L	
Se	77	-2.863181	699.694	ug/L	0.203
Se	78	2.893504	7847.939	ug/L	0.794

QC Calculated Values

	Analyte	QC Std % Recovery	Int Std % Recovery
	Li		
	Be		
	B		
	B		
	C		
	Na		
	Mg		
	Mg		
	Al		
	Si		
	P		
	S		
	Cl		
	K		
	Ca		
>	Sc		110.473
	Ti		
	Ti		
	V		
	ClO		
	Cr		
	Cr		
	Fe		
	Mn		
	Fe		

	Fe	
	Co	
	Ni	
	Ni	
	Cu	
	Zn	
	Cu	
	Zn	
	Zn	
>	Ge	103.564
	As	
	Se	
	ArCl	
	Br	
	Br	
	Y	
	Mo	
	Rh	
	Ag	
	Ag	
	Cd	
	Cd	
>	In	96.751
	Sb	
	Sb	
	Ba	
	Ba	
	Tb	
>	Ho	95.533
	Hg	
	Hg	
	Tl	
	Pb	
	Bi	
	Se	
	Se	

Sample ID: 163786.03
Sample Date/Time: Monday, December 19, 2016 16:54:43
Autosampler Position: 26
Sample Description: 1:1 Na LR
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\163786.03.92551

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		16416.172	ug/L	
Be	9	0.016670	10.667	ug/L	0.005
B	10	20.143181	2328.965	ug/L	0.035
B	11	21.057480	11940.169	ug/L	0.474
C	12		423670.867	ug/L	
Na	23	33151.202509	204737738.994	ug/L	1051.551
Mg	24	638.477819	2729383.677	ug/L	12.850
Mg	25	610.687527	368680.737	ug/L	7.735
Al	27	512.928782	3189824.025	ug/L	3.281
Si	28		8446192.865	ug/L	
P	31	176.782592	54043.502	ug/L	1.666
S	32		40281261.824	ug/L	
Cl	35		7748002.477	ug/L	
K	39	1792.289525	15267156.488	ug/L	24.216
Ca	44	2099.049509	589290.483	ug/L	19.590
Sc	45		154647.134	ug/L	
Ti	47	32.805209	22046.704	ug/L	0.059
Ti	48	33.092892	226734.187	ug/L	0.074
V	51	0.532723	34378.548	ug/L	0.056
ClO	51		36487.745	ug/L	
Cr	52	1.679645	17796.144	ug/L	0.019
Cr	53	-0.933763	9668.472	ug/L	0.156
Fe	54	733.630763	468432.058	ug/L	13.929
Mn	55	14.789292	165693.089	ug/L	0.107
Fe	56	763.603572	9157947.764	ug/L	3.522
Fe	57	746.583253	184207.639	ug/L	6.541
Co	59	0.281996	2929.139	ug/L	0.002
Ni	60	1.097761	2164.258	ug/L	0.033
Ni	62	1.267225	401.342	ug/L	0.088
Cu	63	1.117607	5154.128	ug/L	0.015
Zn	64	3.420615	6982.313	ug/L	0.012
Cu	65	0.830906	1844.520	ug/L	0.038
Zn	66	3.172905	3766.447	ug/L	0.103
Zn	68	3.567452	8177.677	ug/L	0.100
Ge	72		118712.739	ug/L	
As	75	6.224960	8071.999	ug/L	0.060
Se	82	-0.210730	-19.851	ug/L	0.050
ArCl	77		710.028	ug/L	
Br	79		7901.106	ug/L	

Br	81		22204.765	ug/L	
Y	89		349592.621	ug/L	
Mo	95	0.739793	2683.729	ug/L	0.008
Rh	103		360804.591	ug/L	
Ag	107	-0.026206	202.002	ug/L	0.001
Ag	109	-0.024509	207.669	ug/L	0.001
Cd	111	0.005210	49.667	ug/L	0.002
Cd	114	0.009669	142.668	ug/L	0.001
In	115		463223.125	ug/L	
Sb	121	0.223337	1986.217	ug/L	0.005
Sb	123	0.217370	1496.821	ug/L	0.004
Ba	137	4.709984	22729.045	ug/L	0.037
Ba	138	4.769457	148917.878	ug/L	0.084
Tb	159		666910.157	ug/L	
Ho	165		685208.086	ug/L	
Hg	200	0.139860	387.342	ug/L	0.000
Hg	202	0.104457	383.341	ug/L	0.005
Tl	205	-0.013420	1738.167	ug/L	0.003
Pb	208	0.353662	19425.499	ug/L	0.006
Bi	209		590500.427	ug/L	
Se	77	-3.061308	682.692	ug/L	0.143
Se	78	2.896430	7848.836	ug/L	0.108

QC Calculated Values

	Analyte	QC Std % Recovery	Int Std % Recovery
	Li		
	Be		
	B		
	B		
	C		
	Na		
	Mg		
	Mg		
	Al		
	Si		
	P		
	S		
	Cl		
	K		
	Ca		
>	Sc		109.480
	Ti		
	Ti		
	V		
	ClO		
	Cr		
	Cr		
	Fe		
	Mn		
	Fe		

	Fe	
	Co	
	Ni	
	Ni	
	Cu	
	Zn	
	Cu	
	Zn	
	Zn	
>	Ge	102.017
	As	
	Se	
	ArCl	
	Br	
	Br	
	Y	
	Mo	
	Rh	
	Ag	
	Ag	
	Cd	
	Cd	
>	In	94.837
	Sb	
	Sb	
	Ba	
	Ba	
	Tb	
>	Ho	94.035
	Hg	
	Hg	
	Tl	
	Pb	
	Bi	
	Se	
	Se	

Sample ID: 163786.03 MS
Sample Date/Time: Monday, December 19, 2016 17:01:11
Autosampler Position: 27
Sample Description: 1:1 Na LR pre
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\163786.03 MS.92552

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		16230.476	ug/L	
Be	9	452.607227	166935.176	ug/L	20.214
B	10	18.292256	2221.938	ug/L	0.536
B	11	18.731693	11184.877	ug/L	0.715
C	12		697689.163	ug/L	
Na	23	36163.289200	232503853.785	ug/L	1586.136
Mg	24	5760.978480	25625440.803	ug/L	129.309
Mg	25	5765.592734	3620336.179	ug/L	254.548
Al	27	5774.472109	37341155.044	ug/L	220.486
Si	28		8463381.894	ug/L	
P	31	4920.557364	1407901.364	ug/L	163.638
S	32		42809627.230	ug/L	
Cl	35		8281695.300	ug/L	
K	39	6894.257926	60253648.483	ug/L	266.075
Ca	44	7363.368993	2120858.167	ug/L	203.825
Sc	45		161023.188	ug/L	
Ti	47	40.108972	28037.175	ug/L	1.582
Ti	48	34.835018	248560.189	ug/L	0.055
V	51	471.490820	4104226.590	ug/L	17.814
ClO	51		4262798.487	ug/L	
Cr	52	453.717238	3380568.955	ug/L	20.303
Cr	53	441.905414	404157.504	ug/L	22.306
Fe	54	5498.465104	3419720.689	ug/L	252.501
Mn	55	468.948353	5399552.043	ug/L	18.732
Fe	56	5437.996640	59110387.169	ug/L	367.248
Fe	57	5355.889240	1345675.660	ug/L	375.672
Co	59	437.795123	4179092.382	ug/L	19.171
Ni	60	431.956180	868552.343	ug/L	16.715
Ni	62	433.279813	133548.939	ug/L	16.762
Cu	63	419.900784	1907729.699	ug/L	18.201
Zn	64	450.925136	882679.397	ug/L	19.170
Cu	65	427.389164	915061.326	ug/L	18.674
Zn	66	455.603446	517431.315	ug/L	18.678
Zn	68	448.642555	373612.061	ug/L	17.463
Ge	72		119957.103	ug/L	
As	75	515.337094	609384.257	ug/L	19.010
Se	82	529.027208	72279.649	ug/L	20.438
ArCl	77		51595.684	ug/L	
Br	79		7230.544	ug/L	

Br	81		22016.962	ug/L	
Y	89		361324.454	ug/L	
Mo	95	489.755921	1759527.575	ug/L	20.216
Rh	103		370510.798	ug/L	
Ag	107	20.903087	241196.476	ug/L	0.636
Ag	109	20.861212	230696.052	ug/L	0.819
Cd	111	491.198717	1340460.527	ug/L	17.920
Cd	114	498.057652	3176559.407	ug/L	17.250
In	115		472547.534	ug/L	
Sb	121	498.320454	4282182.149	ug/L	19.272
Sb	123	500.190067	3340886.708	ug/L	17.796
Ba	137	508.390192	2492084.144	ug/L	19.080
Ba	138	507.819428	16117333.047	ug/L	19.124
Tb	159		693287.736	ug/L	
Ho	165		702375.884	ug/L	
Hg	200	0.626724	1724.830	ug/L	0.015
Hg	202	0.581900	2106.577	ug/L	0.024
Tl	205	481.919963	17925612.941	ug/L	21.541
Pb	208	476.753263	25326733.485	ug/L	22.399
Bi	209		606712.077	ug/L	
Se	77	579.531439	50674.858	ug/L	8.320
Se	78	544.454882	173726.392	ug/L	13.343

QC Calculated Values

	Analyte	QC Std % Recovery	Int Std % Recovery
	Li		
	Be		
	B		
	B		
	C		
	Na		
	Mg		
	Mg		
	Al		
	Si		
	P		
	S		
	Cl		
	K		
	Ca		
>	Sc		113.994
	Ti		
	Ti		
	V		
	ClO		
	Cr		
	Cr		
	Fe		
	Mn		
	Fe		

	Fe	
	Co	
	Ni	
	Ni	
	Cu	
	Zn	
	Cu	
	Zn	
	Zn	
>	Ge	103.086
	As	
	Se	
	ArCl	
	Br	
	Br	
	Y	
	Mo	
	Rh	
	Ag	
	Ag	
	Cd	
	Cd	
>	In	96.746
	Sb	
	Sb	
	Ba	
	Ba	
	Tb	
>	Ho	96.391
	Hg	
	Hg	
	Tl	
	Pb	
	Bi	
	Se	
	Se	

Sample ID: 163786.03 MSD
Sample Date/Time: Monday, December 19, 2016 17:07:40
Autosampler Position: 28
Sample Description: 1:1 Na LR pre
Batch ID:
Method File: C:\Elandata\Method\tim.mth
Dataset File: C:\Elandata\Dataset\default\163786.03 MSD.92553

Concentration Results

Analyte	Mass	Conc. Mean	Meas. Intens. Mean	Report Unit	Conc. SD
Li	6		15962.019	ug/L	
Be	9	445.659932	161885.114	ug/L	5.899
B	10	18.456894	2205.601	ug/L	0.504
B	11	18.862042	11083.085	ug/L	0.215
C	12		684412.394	ug/L	
Na	23	35600.388057	225419179.188	ug/L	742.136
Mg	24	5687.496082	24909893.634	ug/L	91.187
Mg	25	5727.081742	3541714.387	ug/L	144.514
Al	27	5651.323746	35989345.363	ug/L	109.453
Si	28		8034466.246	ug/L	
P	31	4833.745810	1362069.382	ug/L	161.754
S	32		43068504.234	ug/L	
Cl	35		8068639.077	ug/L	
K	39	6730.309148	57933938.160	ug/L	95.064
Ca	44	6938.207236	1968501.982	ug/L	18.994
Sc	45		158511.311	ug/L	
Ti	47	37.417546	25763.796	ug/L	0.723
Ti	48	31.276287	219605.387	ug/L	0.652
V	51	469.785595	4027295.500	ug/L	3.925
ClO	51		4181347.232	ug/L	
Cr	52	451.558037	3313586.126	ug/L	2.960
Cr	53	437.713705	394385.368	ug/L	6.886
Fe	54	5432.876942	3328237.168	ug/L	19.328
Mn	55	468.641471	5314081.686	ug/L	2.027
Fe	56	5355.551624	57367340.801	ug/L	85.100
Fe	57	5327.619858	1318687.430	ug/L	10.224
Co	59	438.745860	4124737.963	ug/L	2.178
Ni	60	425.335412	842243.589	ug/L	6.141
Ni	62	426.801473	129553.367	ug/L	6.490
Cu	63	420.225521	1880281.769	ug/L	2.889
Zn	64	449.205325	865985.826	ug/L	0.905
Cu	65	422.820632	891569.912	ug/L	1.305
Zn	66	455.077808	508991.977	ug/L	0.224
Zn	68	450.301435	369272.919	ug/L	3.928
Ge	72		117498.519	ug/L	
As	75	515.362950	597130.964	ug/L	4.636
Se	82	529.228060	70852.695	ug/L	2.918
ArCl	77		50396.987	ug/L	
Br	79		7084.432	ug/L	

Br	81		21305.939	ug/L	
Y	89		353801.336	ug/L	
Mo	95	486.994637	1714480.732	ug/L	2.071
Rh	103		359068.610	ug/L	
Ag	107	20.593709	236249.772	ug/L	0.307
Ag	109	20.600809	226518.108	ug/L	0.360
Cd	111	488.967091	1326702.659	ug/L	7.149
Cd	114	494.731653	3137209.621	ug/L	4.849
In	115		469643.418	ug/L	
Sb	121	498.655587	4260553.455	ug/L	7.397
Sb	123	500.729344	3325241.517	ug/L	6.965
Ba	137	503.967449	2456295.156	ug/L	4.981
Ba	138	502.313958	15851069.544	ug/L	8.444
Tb	159		689606.774	ug/L	
Ho	165		707208.835	ug/L	
Hg	200	0.623015	1727.164	ug/L	0.005
Hg	202	0.593606	2164.925	ug/L	0.014
Tl	205	483.835043	18133824.265	ug/L	3.308
Pb	208	473.247263	25332809.322	ug/L	3.225
Bi	209		607438.074	ug/L	
Se	77	563.899826	49333.513	ug/L	8.948
Se	78	526.756880	168305.553	ug/L	8.001

QC Calculated Values

	Analyte	QC Std % Recovery	Int Std % Recovery
	Li		
	Be		
	B		
	B		
	C		
	Na		
	Mg		
	Mg		
	Al		
	Si		
	P		
	S		
	Cl		
	K		
	Ca		
>	Sc		112.215
	Ti		
	Ti		
	V		
	ClO		
	Cr		
	Cr		
	Fe		
	Mn		
	Fe		

Fe	
Co	
Ni	
Ni	
Cu	
Zn	
Cu	
Zn	
Zn	
> Ge	100.974
As	
Se	
ArCl	
Br	
Br	
Y	
Mo	
Rh	
Ag	
Ag	
Cd	
Cd	
> In	96.152
Sb	
Sb	
Ba	
Ba	
Tb	
> Ho	97.055
Hg	
Hg	
Tl	
Pb	
Bi	
Se	
Se	

Eastern Analytical Inc.
Aqueous Digestion Logbook

BatSamNum	Prep Date	Digestion Batch ID	Reagent/Chem Inv.	Temp. °C	Analyst	Notes
BLK	12/12/16	A	84345.5 83195.2 84653.1	83.7	RJ	
LCS			84654.1 83352.1 83343.1			
AgLCS			83348.1			
163754.01						
02						
03						
04						
05						
06						
07						
08						
09						
10						
163758.01						
03						
163786.01						
02						
03						
03MS			84654.1 83352.1 83343.1			MS/MSD requested by client
03MSD			" " "			" "
04						
05						
06						
~~163758.01~~						

Metals_AQ_DigestionLogbook_05172013

Sub Work

Raw Data

EXTRACTION INFORMATION

Process Sheet

Workorder: 1601554

Prep Expiration: 12/22/2016

Client: Eastern Analytical, Inc.

Workorder Due: 03-Jan-17 00:00

TAT: 21

Method: **537 PFAS**

Matrix: **Aqueous**

Prep Batch: B6L0074

Prep Data Entered: 12/15/16 JS
Date and Initials

Version: UCMR (6 Analyte)

Initial Sequence:

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1601554-01	☑	GW-EB-Water Level	13-Dec-16 10:33	WR-2 E-7	
1601554-02	☑	FB-DI Water	13-Dec-16 10:33	WR-2 E-7	
1601554-03	☐	GW-FPC-3A GW-FPC-3B	13-Dec-16 10:33	WR-2 E-7	**MS/MSD**
1601554-04	☑	GW-FPC-3B	13-Dec-16 10:33	WR-2 E-7	
1601554-05	☑	GW-FPC-3B-Dup	13-Dec-16 10:33	WR-2 E-7	
1601554-06	☑	GW-FPC-3C	13-Dec-16 10:33	WR-2 E-7	

WO Comments: **Report to MDL.**

Vista PM: Martha Maier

Vial Box ID: Llama

Sample Reconciled By: [signature] 12/14/16

Page 1 of 1

Percent Solids

Vista Analytical Laboratory

Project: B6L0076 *Balance ID:* HRMS 8

Sample ID	Chemist: NA Date: ↓ Time: ↓ Boat Wt.	Sample + Boat Wt.	Chemist: NA Date: ↓ Time: ↓ Residue + Boat Wt.	Chemist/Date JS 12/14/16 pH before	pH* after	Cl
1601554-01 Ⓐ			JS 12/14/16	5	2	0
-02				5	2	0
-03"A" Ⓑ				7	2	0
-03"B"				7	2	0
-03"C"				7	2	0
-04				7	2	0
-05				7	2	0
-06				7	2	0

Procedure:

- Tare the balance.
- Record Boat Weight.
- Add 2 - 10 g of sample.
- Record Wet Wt. + Boat Wt.
- Dry in oven overnight at 107°C.
- Tare the balance.
- Record Residue + Boat Wt.

Notes:

Ⓐ 2 drops HCl used to adjust pH
Ⓑ 3 drops HCl used to adjust pH JS 12/14/16

- *Methods 8280, 613, 1613, 8290, 1614 – pH <9*
- *Methods 1668/PCN – pH 2-3*
- *NCASI 551 – pH 1*

%Solids rmh 5/2011

Matrix: Aqueous
Method: 537 PFAS

PREPARATION BENCH SHEET

B6L0076

Chemist: E Schneider
Prep Date/Time: 14-Dec-16 09:47

Prepared using: LCMS - SPE Extraction-LCMS

C	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE (C6L0060)	RS CHEM/WIT DATE
☐	B6L0076-BLK1	NA	NA	(0.125)	ES JS 12/14/16	JS 12/14/16	ES JS 12/14/16
☐	B6L0076-BS1						
☐	B6L0076-MS1 1601554-03	~~152.35~~ 150.89 JS 12/14/16 (A)	26.96	0.12393			
☐	B6L0076-MSD1 1601554-03	147.92	26.99	0.12093			
☐	1601554-01	150.18	26.96	0.12322			
☐	1601554-02	149.87	26.90	0.12297			
☐	1601554-03	157.40	26.92	0.13048			
☐	1601554-04	151.45	27.03	0.12442			
☐	1601554-05	152.01	26.95	0.12506			
☐	1601554-06	152.43	26.80	0.12563			

(A) Accidently wrote down wrong ~~[illegible]~~ bottle weight. JS 12/14/16

IS Name (J1) 16I2604, 10uL
NS Name (V3) 16J2905, 10uL
RS Name (U3) 16K1105, 10uL

SPE Chem: Strata X AW 33um 200mg/6mL
Ele SOLV: 0.5% NH4OH in MeOH + H2OH
Final Volume(s) 1mL

Check Out: Chemist/Date: JS 12/14/16
Check In: Chemist/Date: NA
Balance ID: HRMS B

Comments: Assume 1 g = 1 mL

SAMPLE DATA – MODIFIED EPA METHOD 537

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_16.qld

Last Altered: Tuesday, December 20, 2016 16:29:00 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:30:02 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: B6L0076-BLK1, Description: Method Blank, Name: 161219J2_16.wiff, Date: 19-Dec-2016, Time: 17:59:08

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	79.90		6.353e3		0.125			
2	5 PFHpA	318.90	1.131e1	8.370e3		0.125	4.56		
3	6 PFHxS	79.91	1.710e1	1.336e3		0.125	4.66		
4	8 PFOA	368.90	8.277e1	7.604e3		0.125	4.95		
5	9 PFNA	419.00		6.641e3		0.125			
6	10 PFOS	79.92		3.617e3		0.125			
7	15 13C3-PFBS	79.95	6.353e3	1.200e4	0.518	0.125	3.71	102	102
8	16 13C2-PFHxA	269.90	4.174e3	1.200e4	0.920	0.125	4.06	37.8	94.5
9	17 13C4-PFHpA	321.90	8.370e3	1.200e4	0.839	0.125	4.56	83.1	83.1
10	18 18O2-PFHxS	102.90	1.336e3	5.188e3	0.279	0.125	4.66	92.4	92.4
11	19 13C2-6:2 FTS	408.90	2.183e3	1.352e4	0.177	0.125	4.91	91.2	91.2
12	20 13C2-PFOA	369.90	7.604e3	1.352e4	0.665	0.125	4.95	84.5	84.5
13	21 13C5-PFNA	422.90	6.641e3	7.320e3	0.958	0.125	5.27	94.7	94.7
14	22 13C8-PFOS	79.93	3.617e3	4.344e3	0.950	0.125	5.31	87.7	87.7
15	25 13C4-PFBA	171.90	1.149e4	1.149e4	1.000	0.125	2.37	100	100
16	26 13C5-PFHxA	273.00	1.200e4	1.200e4	1.000	0.125	4.06	100	100
17	27 13C3-PFHxS	80.01	5.188e3	5.188e3	1.000	0.125	4.66	100	100
18	28 13C8-PFOA	375.90	1.352e4	1.352e4	1.000	0.125	4.95	100	100
19	29 13C9-PFNA	427.00	7.320e3	7.320e3	1.000	0.125	5.27	100	100
20	30 13C4-PFOS	79.94	4.344e3	4.344e3	1.000	0.125	5.31	100	100
21	31 13C6-PFDA	474.00	7.613e3	7.613e3	1.000	0.125	5.47	100	100
22	32 Total PFBS	79.90		6.353e3		0.125			
23	33 Total PFHxS	79.91		1.336e3		0.125			
24	34 Total PFOA	368.90		7.604e3		0.125			
25	35 Total PFOS	79.92		3.617e3		0.125		0.625	

Rev'd: MM 12/21/16 pw 12/20/16

Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

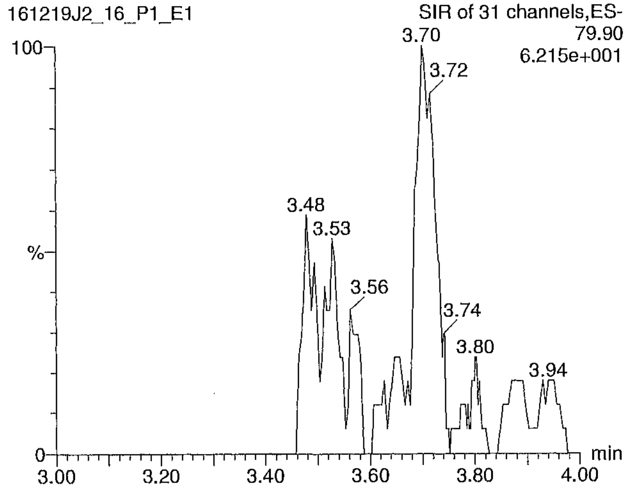
Dataset: U:\Q2.PRO\Results\161219J2\161219J2_16.qld

Last Altered: Tuesday, December 20, 2016 16:29:00 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:30:02 Pacific Standard Time

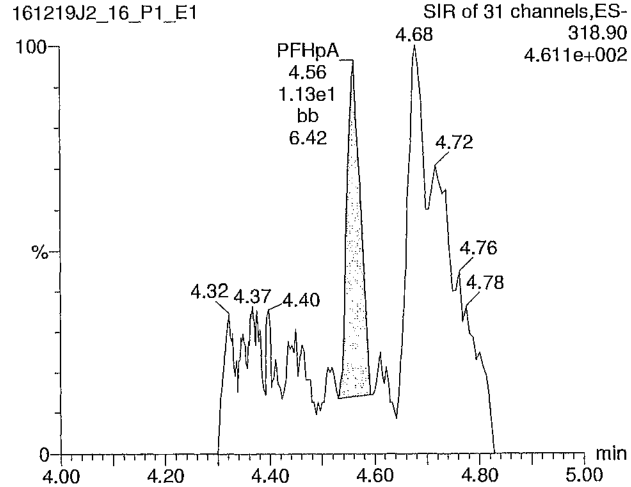
Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: B6L0076-BLK1, Description: Method Blank, Name: 161219J2_16.wiff, Date: 19-Dec-2016, Time: 17:59:08, Instrument: , Lab: ©PE-SCIEX, User: sciex

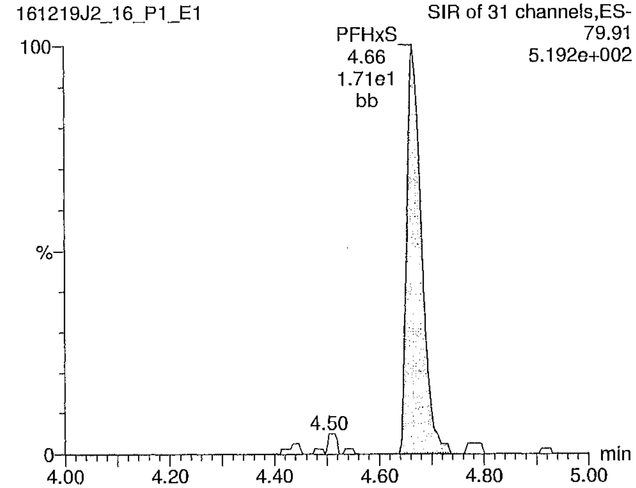
Total PFBS
161219J2_16_P1_E1



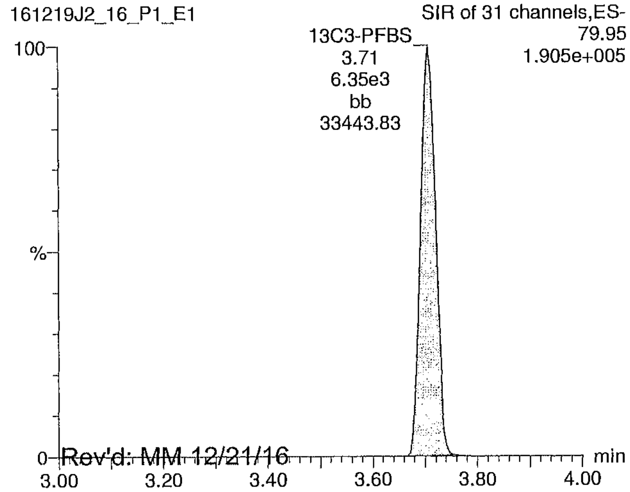
PFHpA
161219J2_16_P1_E1



Total PFHxS
161219J2_16_P1_E1

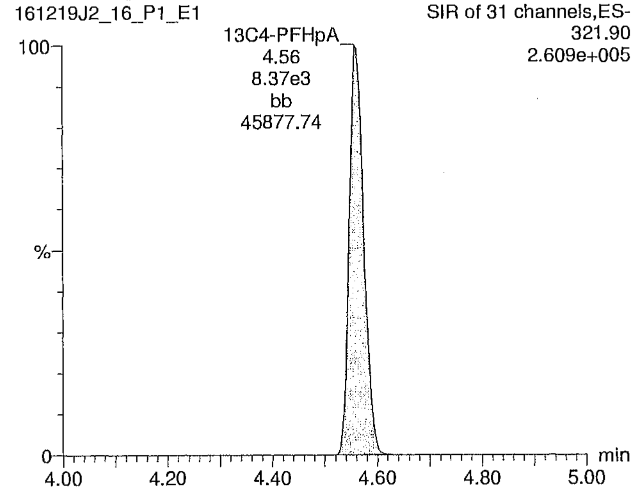


13C3-PFBS
161219J2_16_P1_E1

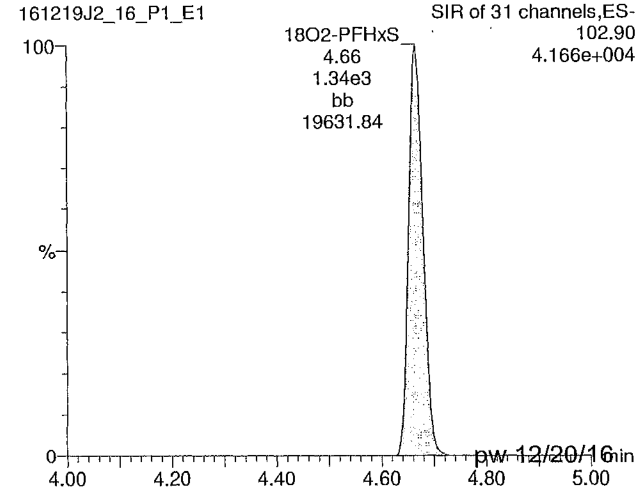


Rev'd: MM 12/21/16

13C4-PFHpA
161219J2_16_P1_E1



18O2-PFHxS
161219J2_16_P1_E1



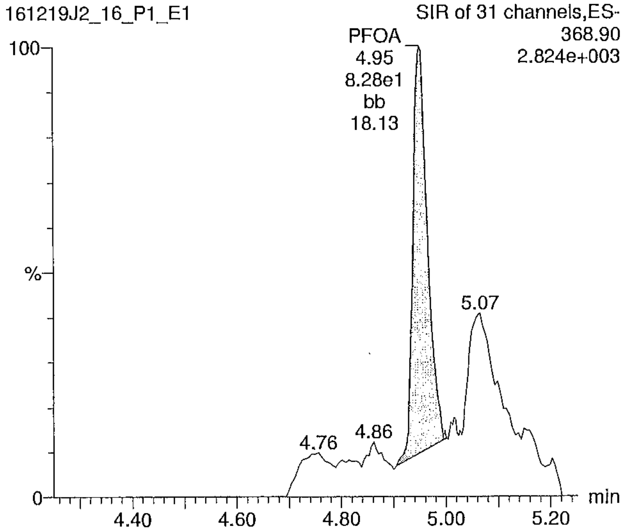
pw 12/20/16

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_16.qld

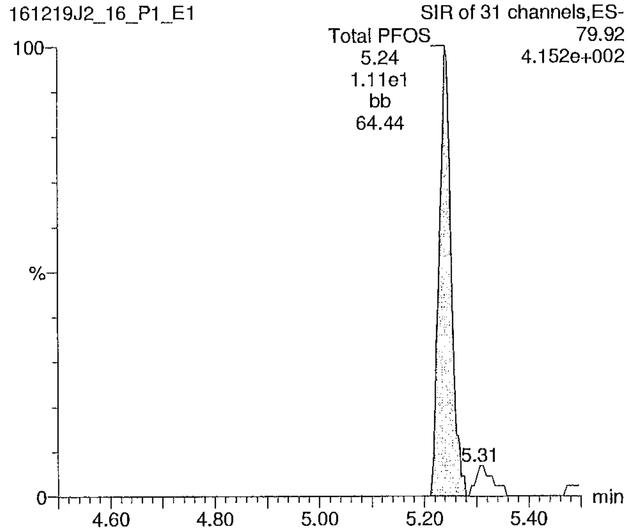
Last Altered: Tuesday, December 20, 2016 16:29:00 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:30:02 Pacific Standard Time

ID: B6L0076-BLK1, Description: Method Blank, Name: 161219J2_16.wiff, Date: 19-Dec-2016, Time: 17:59:08, Instrument: , Lab: ©PE-SCIEX, User: sciex

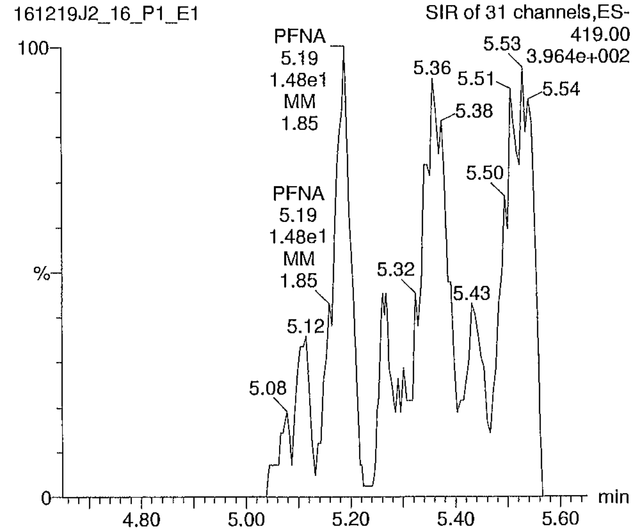
Total PFOA



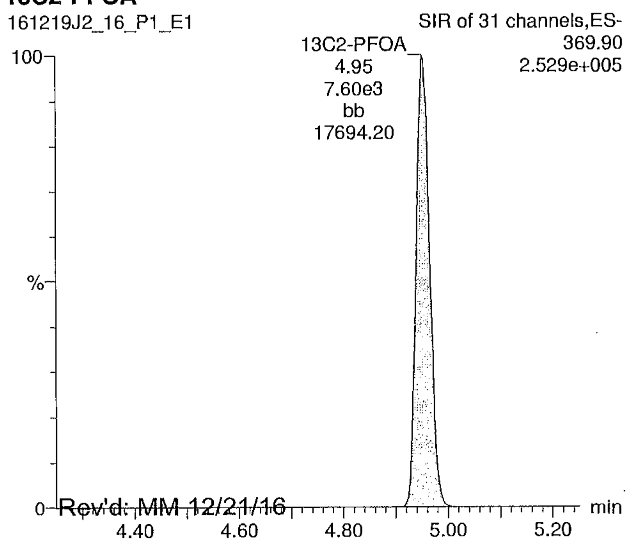
Total PFOS



PFNA

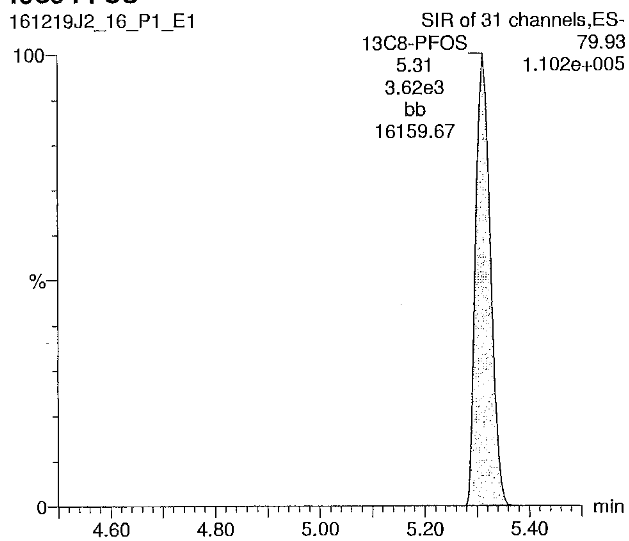


13C2-PFOA

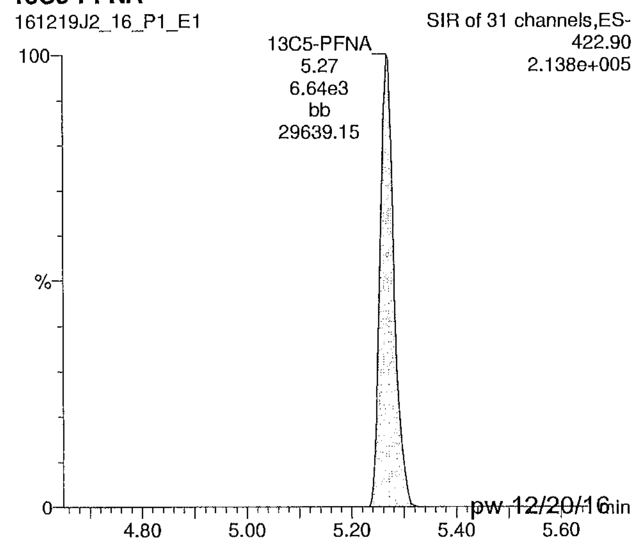


Rev'd: MM 12/21/16

13C8-PFOS



13C5-PFNA



pw 12/20/16

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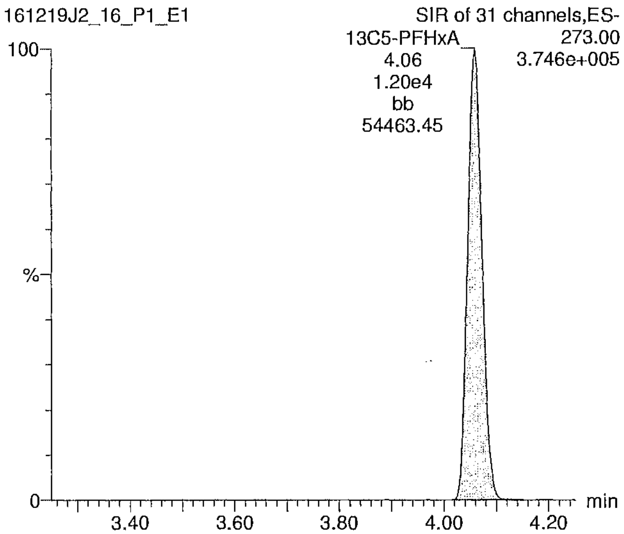
Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_16.qld

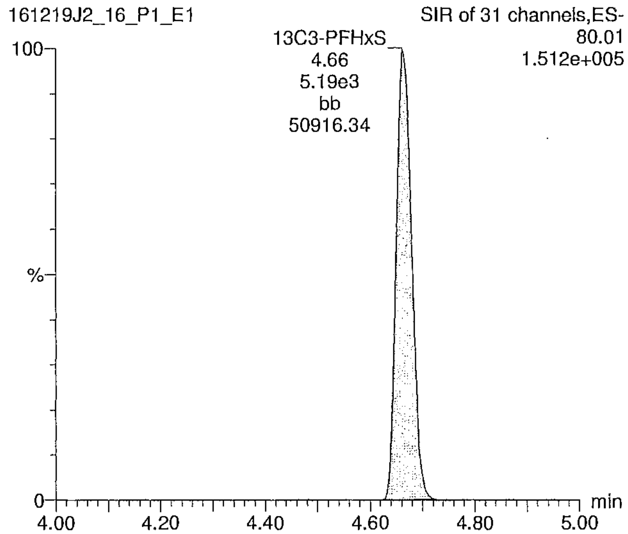
Last Altered: Tuesday, December 20, 2016 16:29:00 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:30:02 Pacific Standard Time

ID: B6L0076-BLK1, Description: Method Blank, Name: 161219J2_16.wiff, Date: 19-Dec-2016, Time: 17:59:08, Instrument: , Lab: ©PE-SCIEX, User: sciex

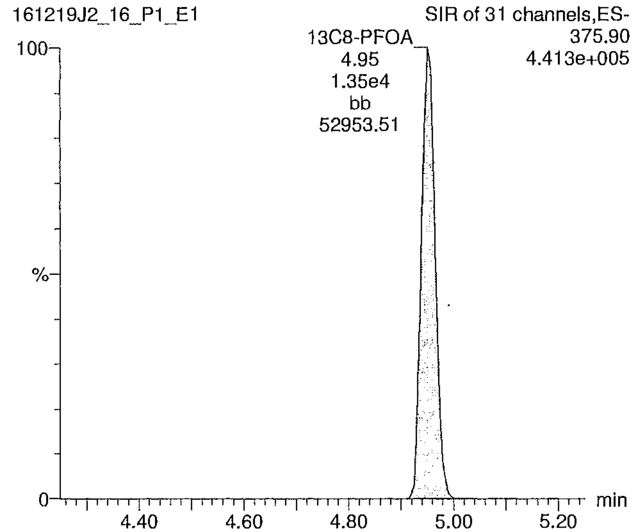
13C5-PFHxA



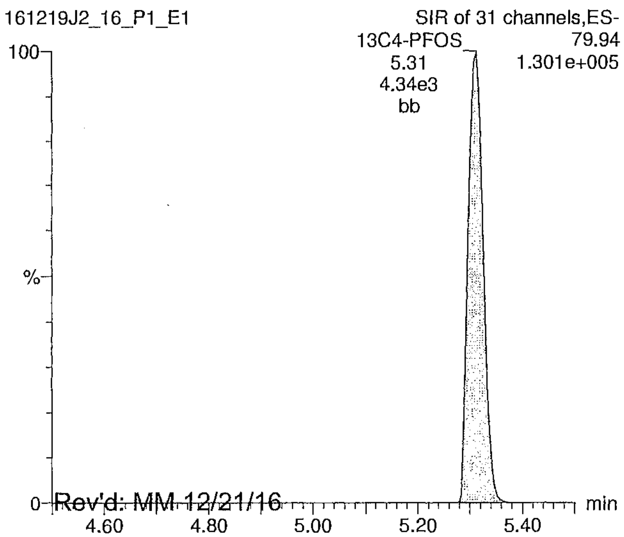
13C3-PFHxS



13C8-PFOA

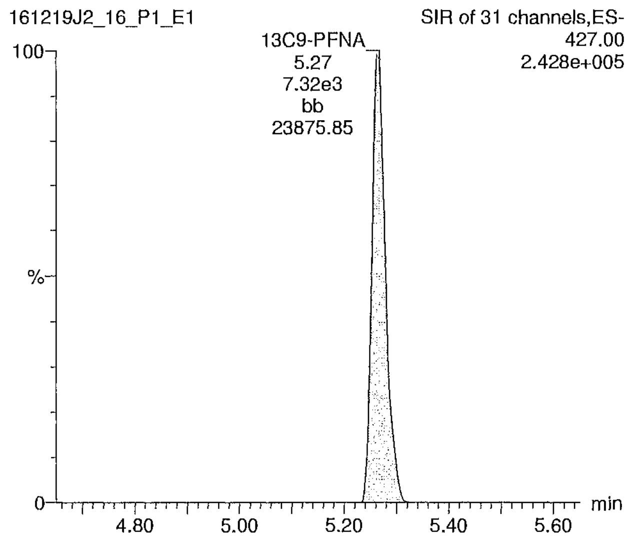


13C4-PFOS



Rev'd: MM 12/21/16

13C9-PFNA



pw 12/20/16

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_13.qld

Last Altered: Tuesday, December 20, 2016 16:24:25 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:25:16 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: B6L0076-BS1, Description: OPR, Name: 161219J2_13.wiff, Date: 19-Dec-2016, Time: 17:22:27

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	79.90	4.319e3	6.221e3		0.125	3.71	87.0	109
2	5 PFHpA	318.90	6.168e3	8.419e3		0.125	4.59	92.0	115
3	6 PFHxS	79.91	2.878e3	1.297e3		0.125	4.70	86.6	108
4	8 PFOA	368.90	7.045e3	6.979e3		0.125	4.97	93.7	117
5	9 PFNA	419.00	5.291e3	7.249e3		0.125	5.26	82.5	103
6	10 PFOS	79.92	3.259e3	3.873e3		0.125	5.29	90.7	113
7	15 13C3-PFBS	79.95	6.221e3	1.192e4	0.518	0.125	3.71	101	101
8	16 13C2-PFHxA	269.90	4.117e3	1.192e4	0.920	0.125	4.08	37.5	93.8
9	17 13C4-PFHpA	321.90	8.419e3	1.192e4	0.839	0.125	4.59	84.2	84.2
10	18 18O2-PFHxS	102.90	1.297e3	5.170e3	0.279	0.125	4.70	90.1	90.1
11	19 13C2-6:2 FTS	408.90	1.995e3	1.150e4	0.177	0.125	4.94	98.1	98.1
12	20 13C2-PFOA	369.90	6.979e3	1.150e4	0.665	0.125	4.97	91.2	91.2
13	21 13C5-PFNA	422.90	7.249e3	7.838e3	0.958	0.125	5.26	96.6	96.6
14	22 13C8-PFOS	79.93	3.873e3	4.359e3	0.950	0.125	5.29	93.6	93.6
15	25 13C4-PFBA	171.90	1.044e4	1.044e4	1.000	0.125	2.37	100	100
16	26 13C5-PFHxA	273.00	1.192e4	1.192e4	1.000	0.125	4.08	100	100
17	27 13C3-PFHxS	80.01	5.170e3	5.170e3	1.000	0.125	4.70	100	100
18	28 13C8-PFOA	375.90	1.150e4	1.150e4	1.000	0.125	4.97	100	100
19	29 13C9-PFNA	427.00	7.838e3	7.838e3	1.000	0.125	5.26	100	100
20	30 13C4-PFOS	79.94	4.359e3	4.359e3	1.000	0.125	5.29	100	100
21	31 13C6-PFDA	474.00	7.534e3	7.534e3	1.000	0.125	5.41	100	100
22	32 Total PFBS	79.90		6.221e3		0.125		87.0	
23	33 Total PFHxS	79.91		1.297e3		0.125		86.6	
24	34 Total PFOA	368.90		6.979e3		0.125		93.7	
25	35 Total PFOS	79.92		3.873e3		0.125		90.7	

Rev'd: MM 12/21/16 pw 12/20/16

Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

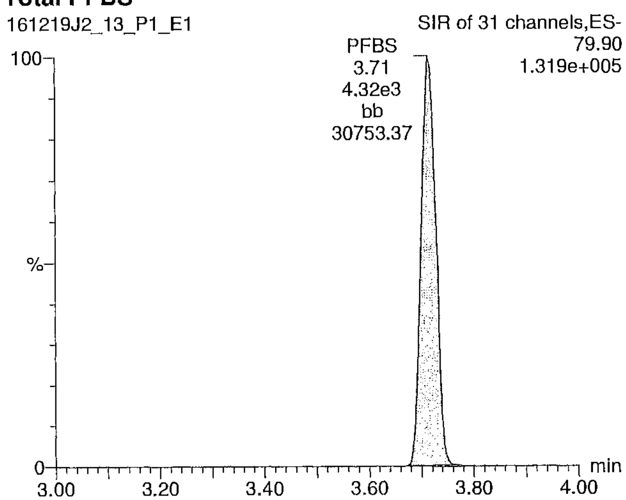
Dataset: U:\Q2.PRO\Results\161219J2\161219J2_13.qld

Last Altered: Tuesday, December 20, 2016 16:24:25 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:25:16 Pacific Standard Time

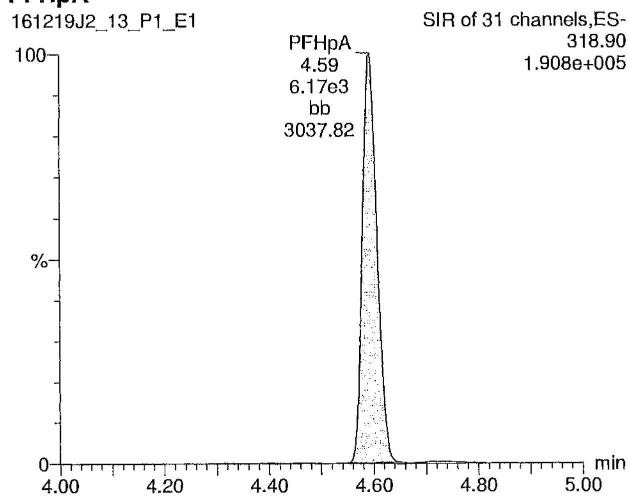
Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: B6L0076-BS1, Description: OPR, Name: 161219J2_13.wiff, Date: 19-Dec-2016, Time: 17:22:27, Instrument: , Lab: ©PE-SCIEX, User: sciex

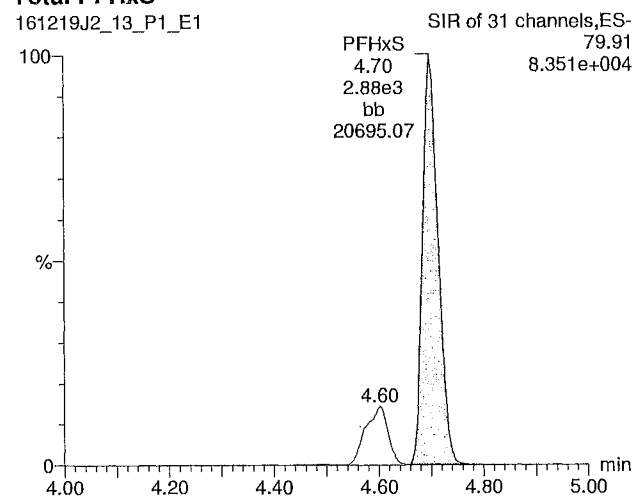
Total PFBS



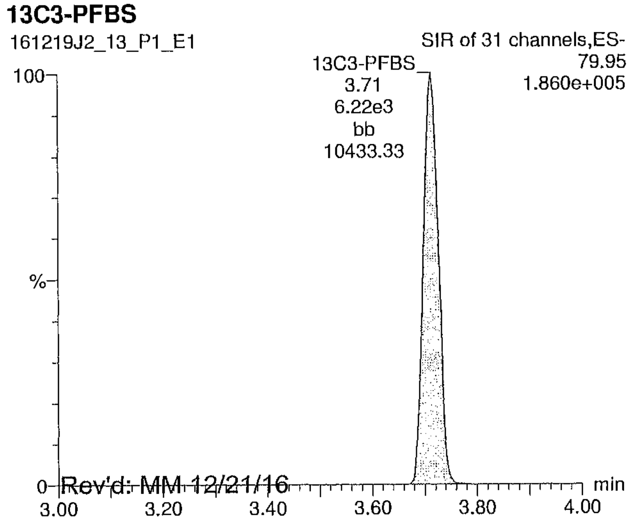
PFHpA



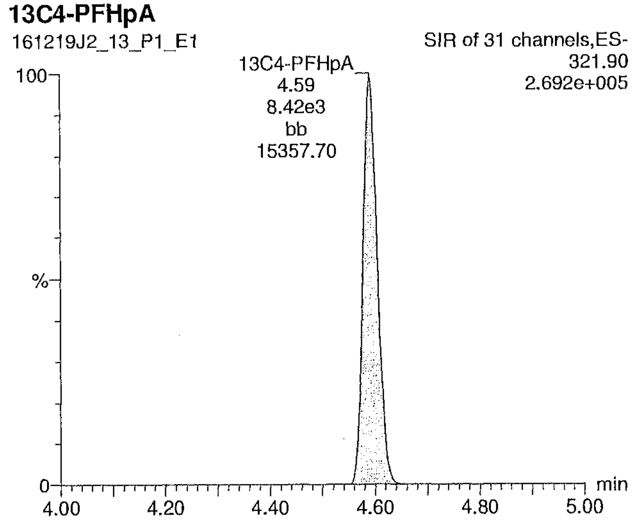
Total PFHxS



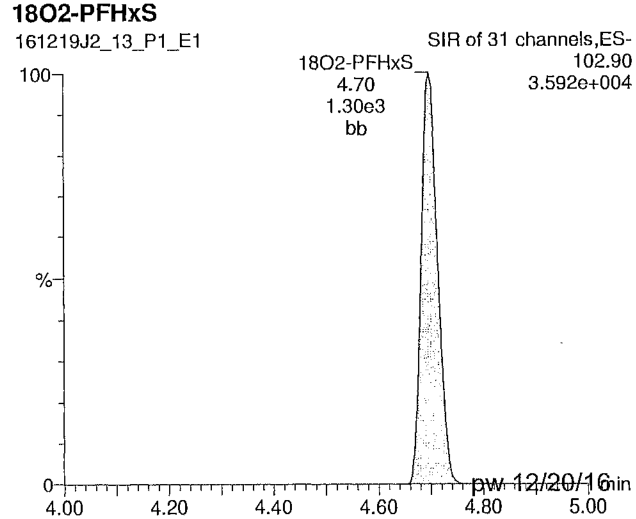
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



~~Rev'd: MM 12/21/16~~

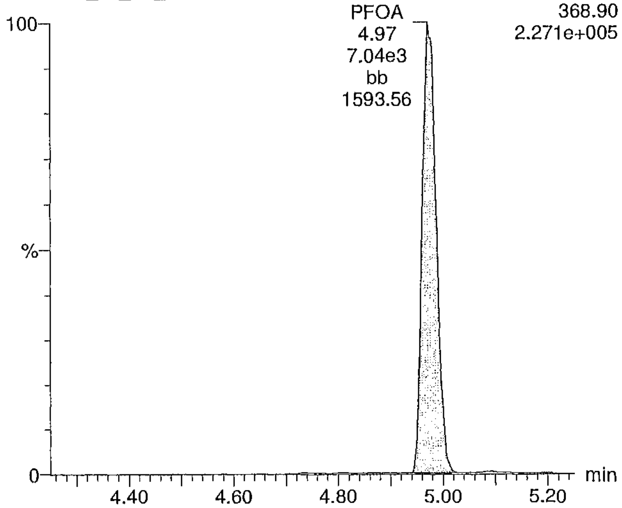
~~pw 12/20/16~~

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_13.qld

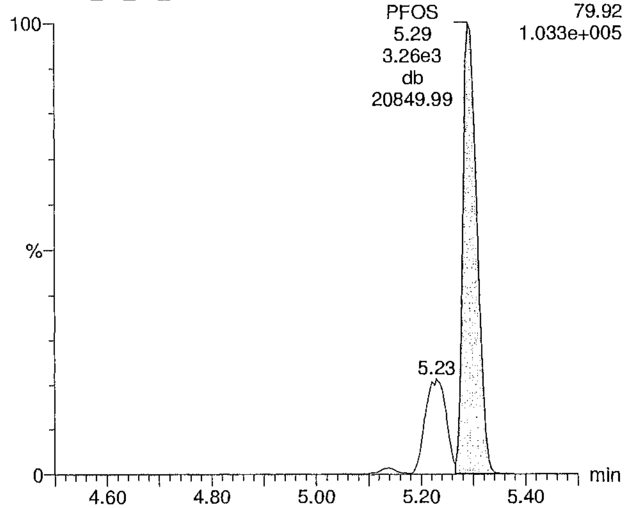
Last Altered: Tuesday, December 20, 2016 16:24:25 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:25:16 Pacific Standard Time

ID: B6L0076-BS1, Description: OPR, Name: 161219J2_13.wiff, Date: 19-Dec-2016, Time: 17:22:27, Instrument: , Lab: ©PE-SCIEX, User: sciex

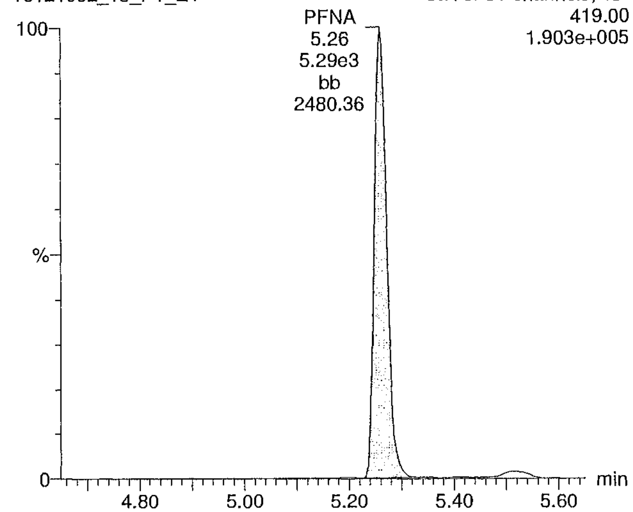
Total PFOA
161219J2_13_P1_E1



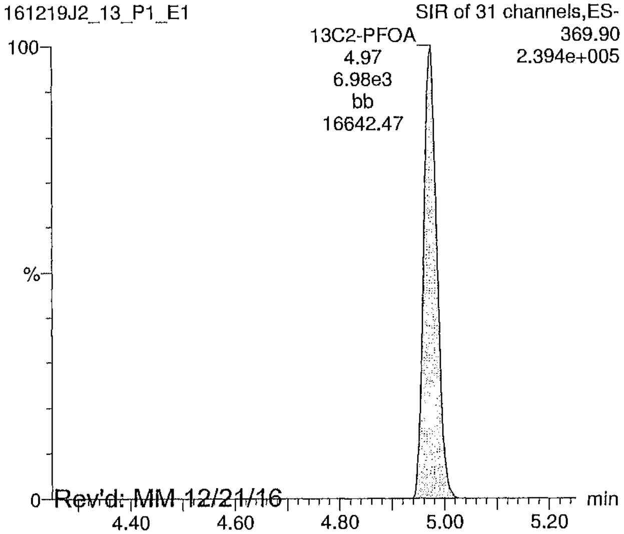
Total PFOS
161219J2_13_P1_E1



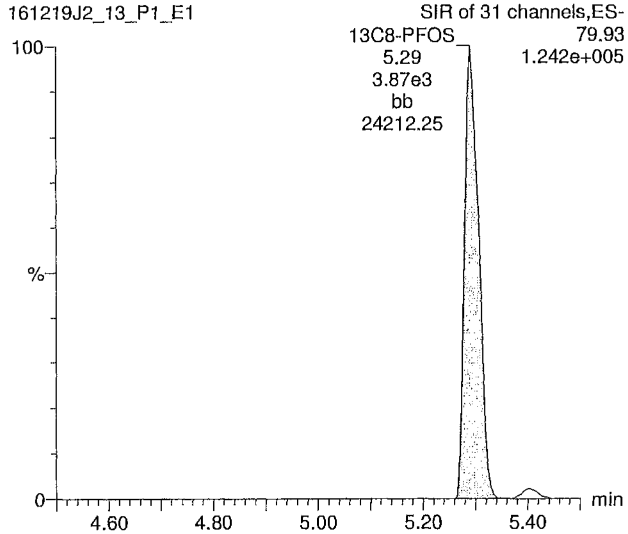
PFNA
161219J2_13_P1_E1



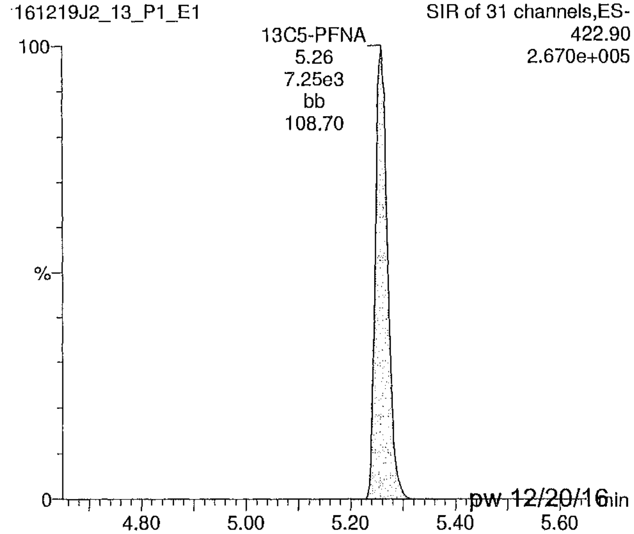
13C2-PFOA
161219J2_13_P1_E1



13C8-PFOS
161219J2_13_P1_E1



13C5-PFNA
161219J2_13_P1_E1



Rev'd: MM 12/21/16

pw 12/20/16

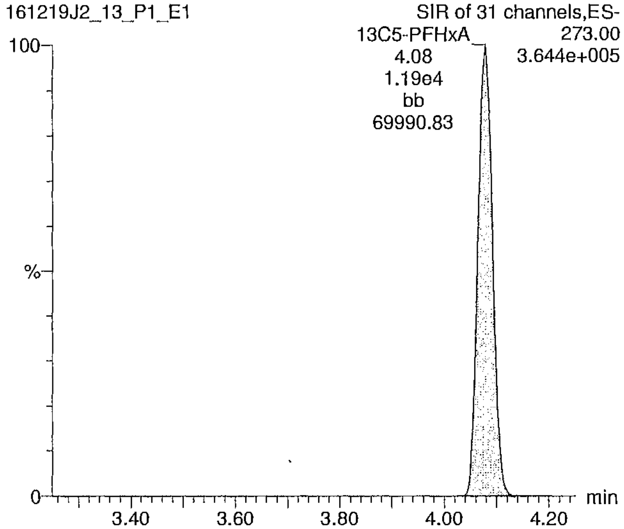
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_13.qld

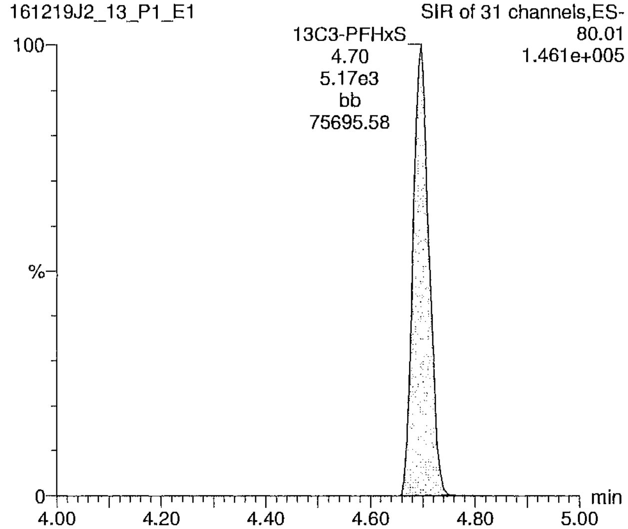
Last Altered: Tuesday, December 20, 2016 16:24:25 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:25:16 Pacific Standard Time

ID: B6L0076-BS1, Description: OPR, Name: 161219J2_13.wiff, Date: 19-Dec-2016, Time: 17:22:27, Instrument: , Lab: ©PE-SCIEX, User: sciex

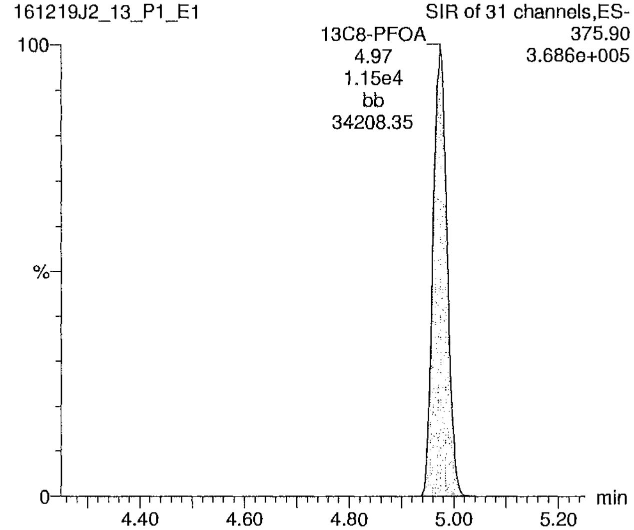
13C5-PFHxA



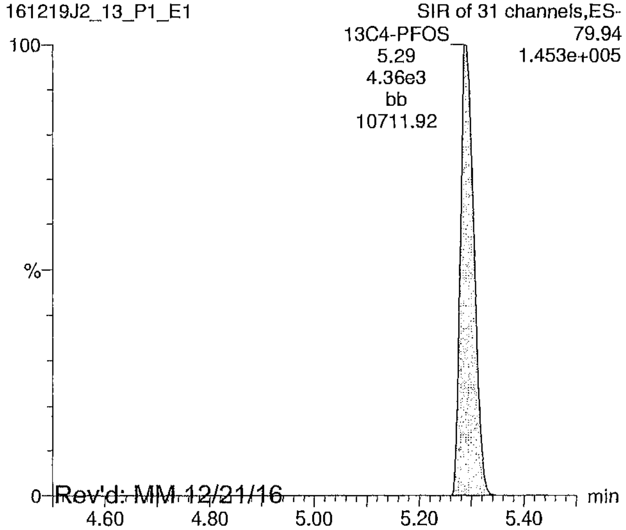
13C3-PFHxS



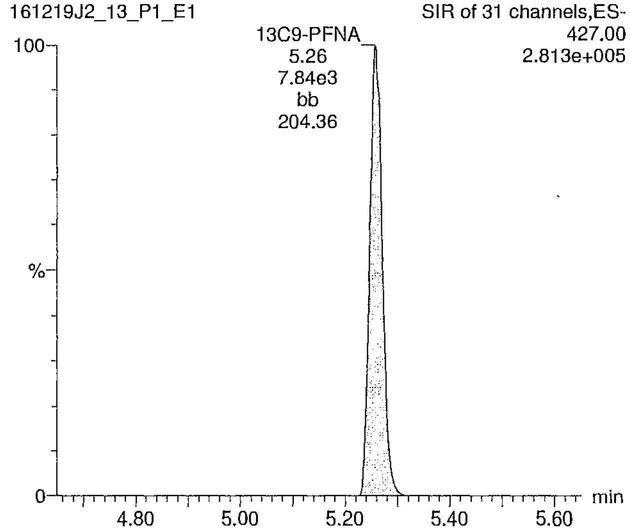
13C8-PFOA



13C4-PFOS



13C9-PFNA



Rev'd: MM 12/21/16

pw 12/20/16

Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_18.qld

Last Altered: Tuesday, December 20, 2016 16:46:34 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:47:22 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: 1601554-01, Description: GW-EB-Water Level, Name: 161219J2_18.wiff, Date: 19-Dec-2016, Time: 18:23:38

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	79.90		5.983e3		0.123			
2	5 PFHpA	318.90		8.359e3		0.123			
3	6 PFHxS	79.91	1.849e1	1.271e3		0.123	4.66		
4	8 PFOA	368.90	8.521e1	6.204e3		0.123	4.95		
5	9 PFNA	419.00		6.167e3		0.123			
6	10 PFOS	79.92		3.854e3		0.123			
7	15 13C3-PFBS	79.95	5.983e3	1.028e4	0.518	0.123	3.70	114	112
8	16 13C2-PFHxA	269.90	3.846e3	1.028e4	0.920	0.123	4.05	41.3	102
9	17 13C4-PFHpA	321.90	8.359e3	1.028e4	0.839	0.123	4.56	98.3	96.9
10	18 18O2-PFHxS	102.90	1.271e3	4.620e3	0.279	0.123	4.67	100	98.8
11	19 13C2-6:2 FTS	408.90	1.796e3	1.129e4	0.177	0.123	4.90	91.2	89.9
12	20 13C2-PFOA	369.90	6.204e3	1.129e4	0.665	0.123	4.95	83.8	82.6
13	21 13C5-PFNA	422.90	6.167e3	6.626e3	0.958	0.123	5.26	98.6	97.2
14	22 13C8-PFOS	79.93	3.854e3	4.274e3	0.950	0.123	5.31	96.3	94.9
15	25 13C4-PFBA	171.90	1.066e4	1.066e4	1.000	0.123	2.37	101	100
16	26 13C5-PFHxA	273.00	1.028e4	1.028e4	1.000	0.123	4.05	101	100
17	27 13C3-PFHxS	80.01	4.620e3	4.620e3	1.000	0.123	4.66	101	100
18	28 13C8-PFOA	375.90	1.129e4	1.129e4	1.000	0.123	4.95	101	100
19	29 13C9-PFNA	427.00	6.626e3	6.626e3	1.000	0.123	5.26	101	100
20	30 13C4-PFOS	79.94	4.274e3	4.274e3	1.000	0.123	5.31	101	100
21	31 13C6-PFDA	474.00	8.321e3	8.321e3	1.000	0.123	5.50	101	100
22	32 Total PFBS	79.90		5.983e3		0.123			
23	33 Total PFHxS	79.91		1.271e3		0.123			
24	34 Total PFOA	368.90		6.204e3		0.123			
25	35 Total PFOS	79.92		3.854e3		0.123		0.548	

Rev'd: MM 12/21/16

pw 12/20/16

Vista Analytical Laboratory Q1

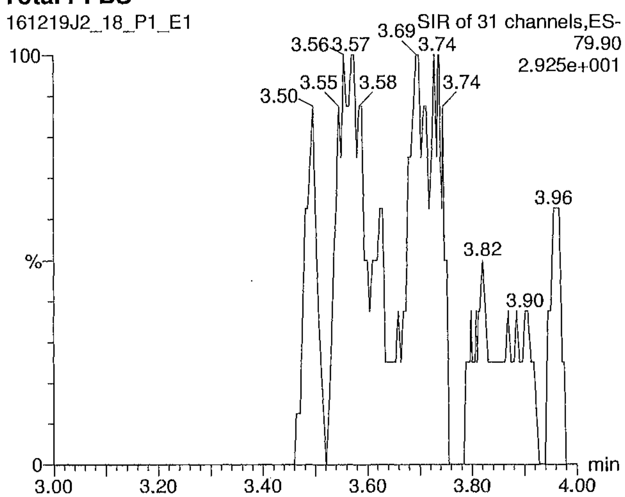
Dataset: U:\Q2.PRO\Results\161219J2\161219J2_18.qld

Last Altered: Tuesday, December 20, 2016 16:46:34 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:47:22 Pacific Standard Time

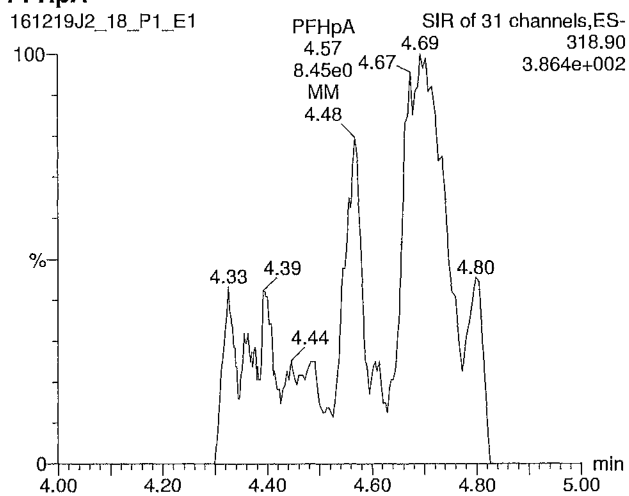
Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: 1601554-01, Description: GW-EB-Water Level, Name: 161219J2_18.wiff, Date: 19-Dec-2016, Time: 18:23:38, Instrument: , Lab: ©PE-SCIEX, User: sciex

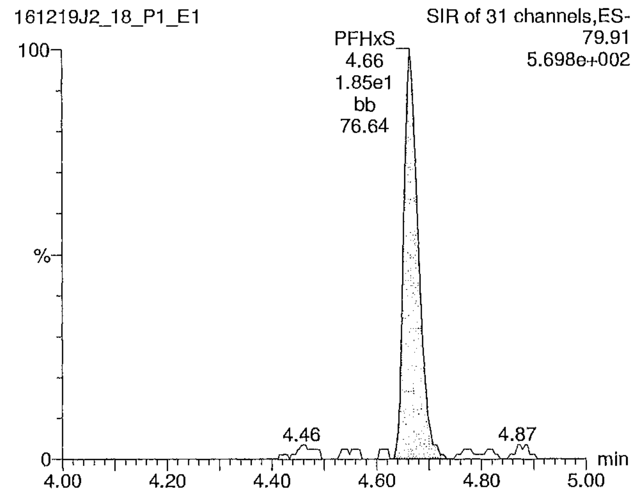
Total PFBS



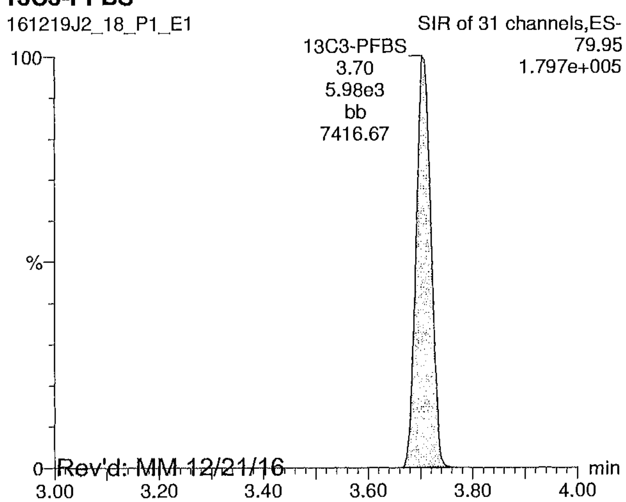
PFHpA



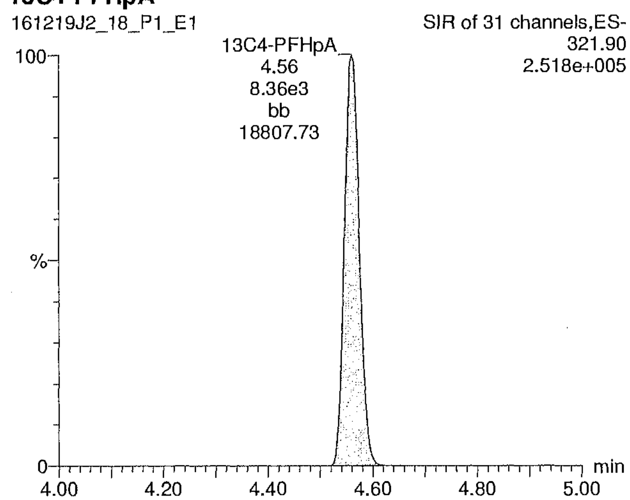
Total PFHxS



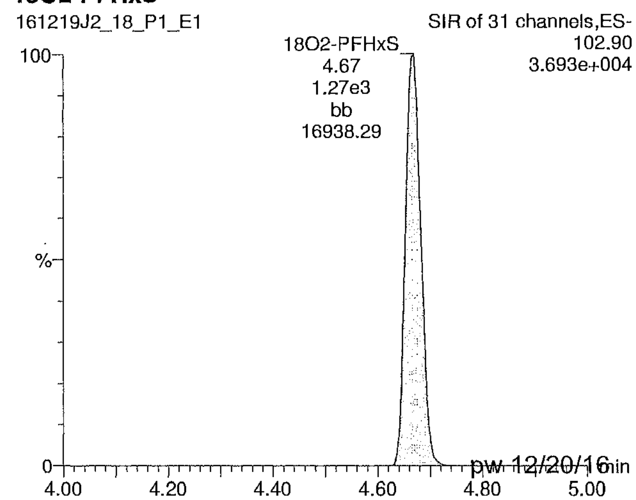
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



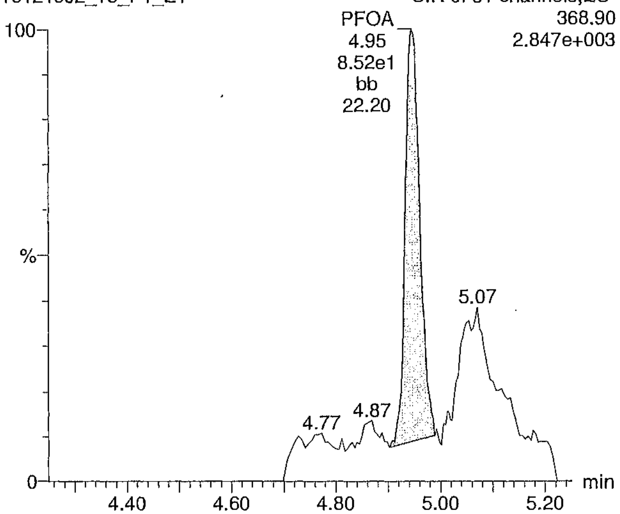
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_18.qld

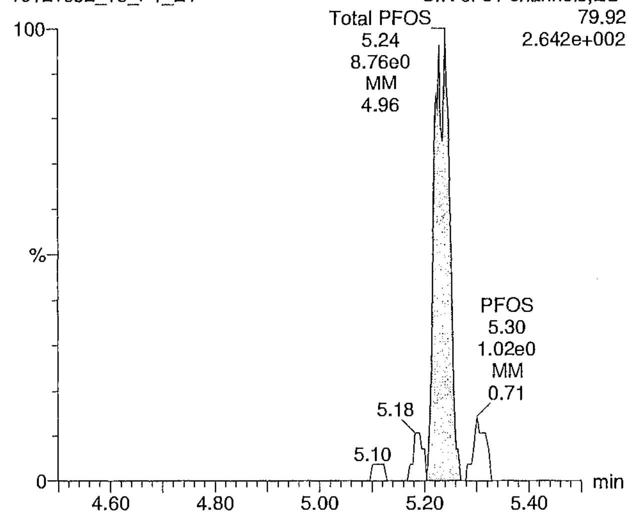
Last Altered: Tuesday, December 20, 2016 16:46:34 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:47:22 Pacific Standard Time

ID: 1601554-01, Description: GW-EB-Water Level, Name: 161219J2_18.wiff, Date: 19-Dec-2016, Time: 18:23:38, Instrument: , Lab: ©PE-SCIEX, User: sciex

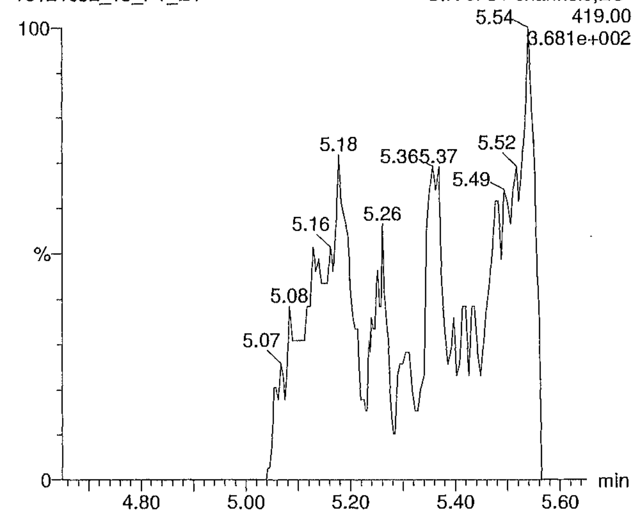
Total PFOA
161219J2_18_P1_E1 SIR of 31 channels,ES- 368.90 2.847e+003



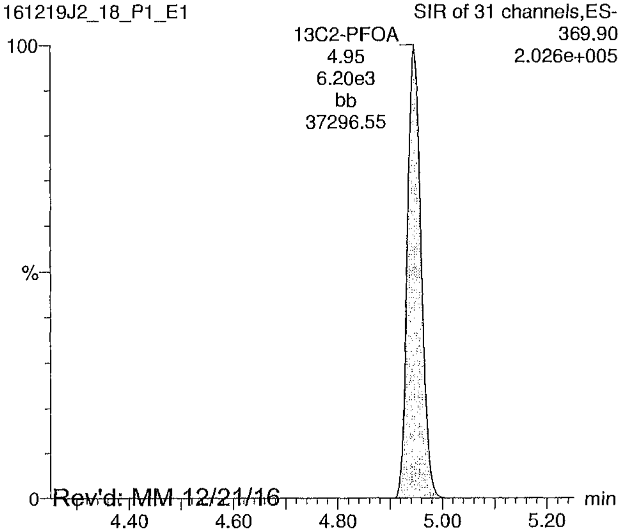
Total PFOS
161219J2_18_P1_E1 SIR of 31 channels,ES- 79.92 2.642e+002



PFNA
161219J2_18_P1_E1 SIR of 31 channels,ES- 419.00 3.681e+002



13C2-PFOA
161219J2_18_P1_E1 SIR of 31 channels,ES- 369.90 2.026e+005



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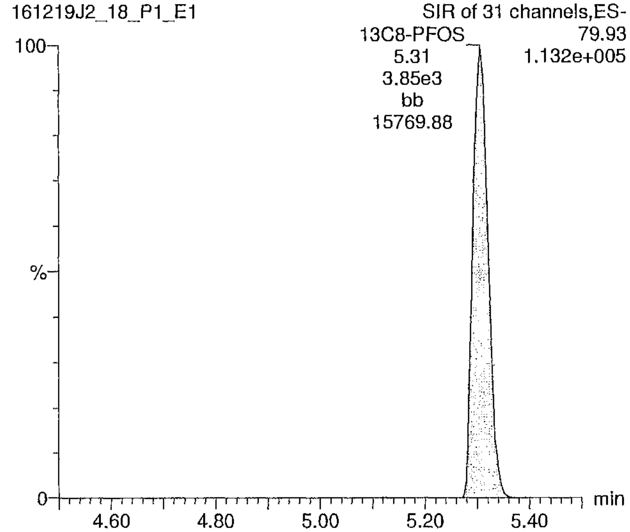
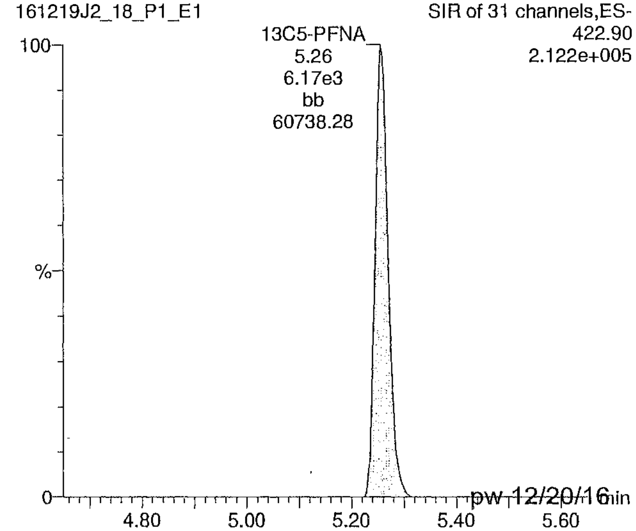
13C8-PFOS
161219J2_18_P1_E1 SIR of 31 channels,ES- 79.93 1.132e+005



13C5-PFNA
161219J2_18_P1_E1 SIR of 31 channels,ES- 422.90 2.122e+005



pw 12/20/16

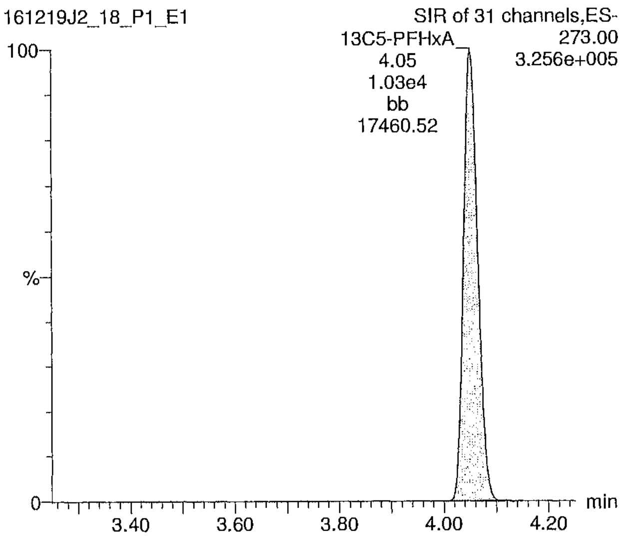
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_18.qld

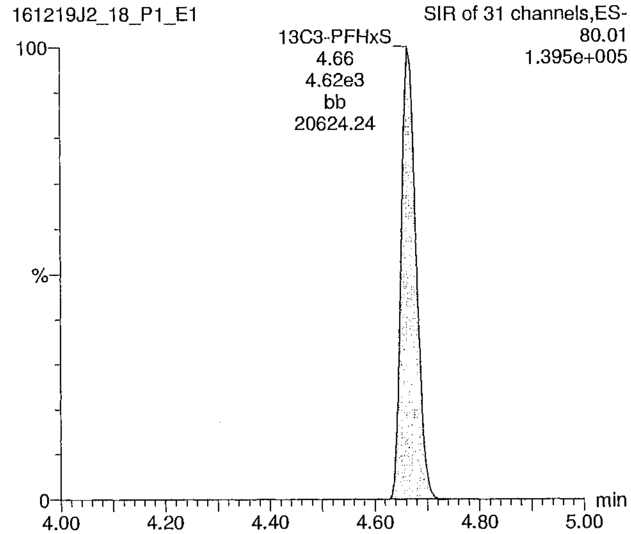
Last Altered: Tuesday, December 20, 2016 16:46:34 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:47:22 Pacific Standard Time

ID: 1601554-01, Description: GW-EB-Water Level, Name: 161219J2_18.wiff, Date: 19-Dec-2016, Time: 18:23:38, Instrument: , Lab: ©PE-SCIEX, User: sciex

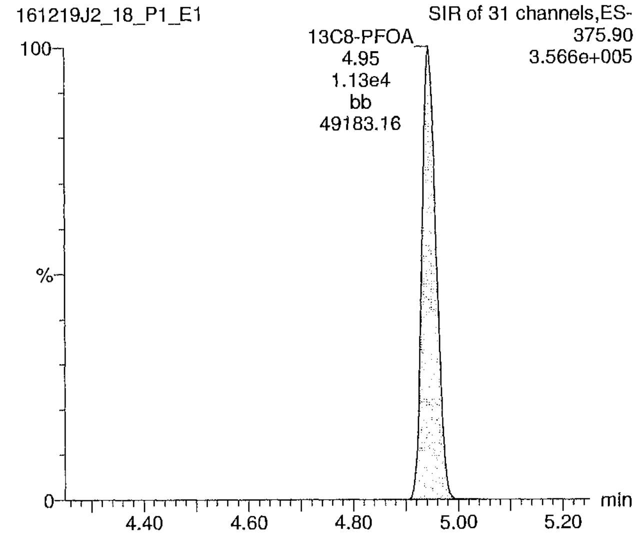
13C5-PFHxA



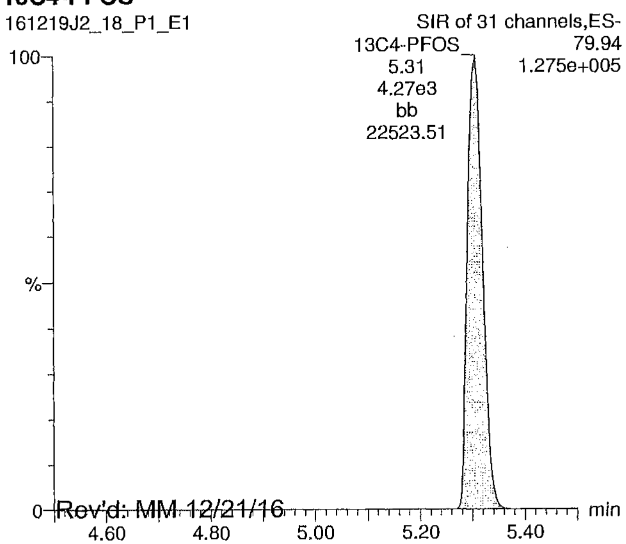
13C3-PFHxS



13C8-PFOA

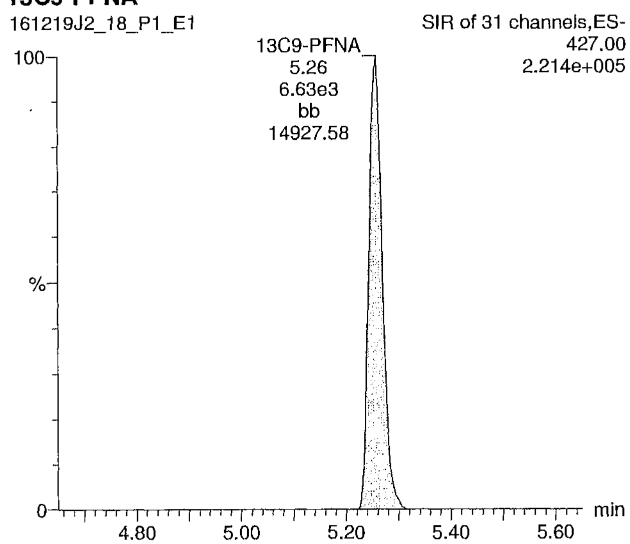


13C4-PFOS



Rev'd: MM 12/21/16

13C9-PFNA



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Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_19.qld

Last Altered: Tuesday, December 20, 2016 16:50:42 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:51:12 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: 1601554-02, Description: FB-DI Water, Name: 161219J2_19.wiff, Date: 19-Dec-2016, Time: 18:35:49

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	79.90	1.405e0	5.877e3		0.123	3.71		
2	5 PFHpA	318.90	7.751e0	7.407e3		0.123	4.56		
3	6 PFHxS	79.91	1.613e1	1.281e3		0.123	4.66		
4	8 PFOA	368.90	6.600e1	6.581e3		0.123	4.94		
5	9 PFNA	419.00		5.712e3		0.123			
6	10 PFOS	79.92		3.145e3		0.123			
7	15 13C3-PFBS	79.95	5.877e3	1.075e4	0.518	0.123	3.71	107	106
8	16 13C2-PFHxA	269.90	3.611e3	1.075e4	0.920	0.123	4.06	37.1	91.2
9	17 13C4-PFHpA	321.90	7.407e3	1.075e4	0.839	0.123	4.56	83.5	82.1
10	18 18O2-PFHxS	102.90	1.281e3	4.798e3	0.279	0.123	4.66	97.5	95.9
11	19 13C2-6:2 FTS	408.90	1.765e3	1.154e4	0.177	0.123	4.90	87.9	86.4
12	20 13C2-PFOA	369.90	6.581e3	1.154e4	0.665	0.123	4.94	87.1	85.7
13	21 13C5-PFNA	422.90	5.712e3	6.544e3	0.958	0.123	5.25	92.7	91.1
14	22 13C8-PFOS	79.93	3.145e3	3.519e3	0.950	0.123	5.29	95.7	94.1
15	25 13C4-PFBA	171.90	1.078e4	1.078e4	1.000	0.123	2.37	102	100
16	26 13C5-PFHxA	273.00	1.075e4	1.075e4	1.000	0.123	4.06	102	100
17	27 13C3-PFHxS	80.01	4.798e3	4.798e3	1.000	0.123	4.66	102	100
18	28 13C8-PFOA	375.90	1.154e4	1.154e4	1.000	0.123	4.94	102	100
19	29 13C9-PFNA	427.00	6.544e3	6.544e3	1.000	0.123	5.24	102	100
20	30 13C4-PFOS	79.94	3.519e3	3.519e3	1.000	0.123	5.29	102	100
21	31 13C6-PFDA	474.00	5.499e3	5.499e3	1.000	0.123	5.48	102	100
22	32 Total PFBS	79.90		5.877e3		0.123			
23	33 Total PFHxS	79.91		1.281e3		0.123			
24	34 Total PFOA	368.90		6.581e3		0.123			
25	35 Total PFOS	79.92		3.145e3		0.123		0.577	

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Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

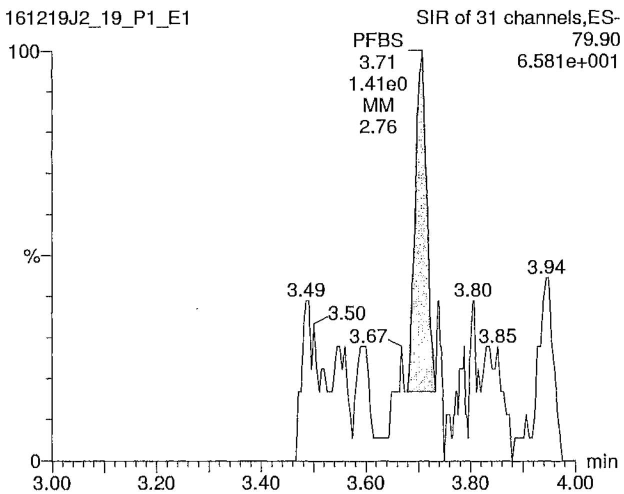
Dataset: U:\Q2.PRO\Results\161219J2\161219J2_19.qld

Last Altered: Tuesday, December 20, 2016 16:50:42 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:51:12 Pacific Standard Time

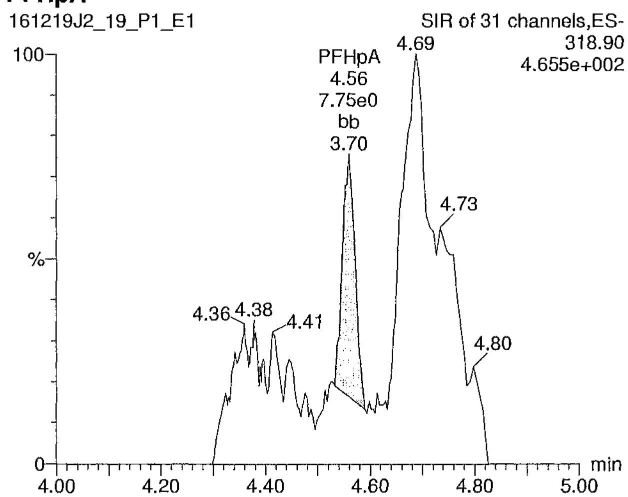
Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: 1601554-02, Description: FB-DI Water, Name: 161219J2_19.wiff, Date: 19-Dec-2016, Time: 18:35:49, Instrument: , Lab: ©PE-SCIEX, User: sciex

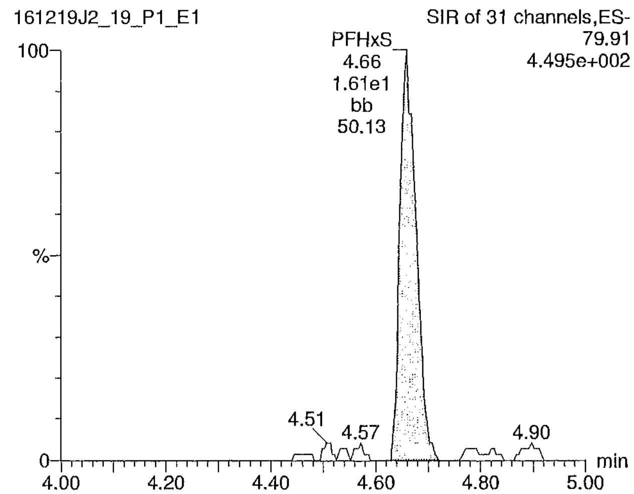
Total PFBS



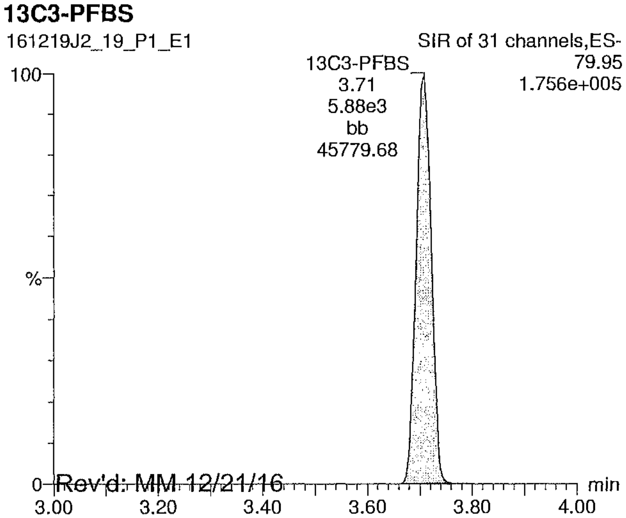
PFHpA



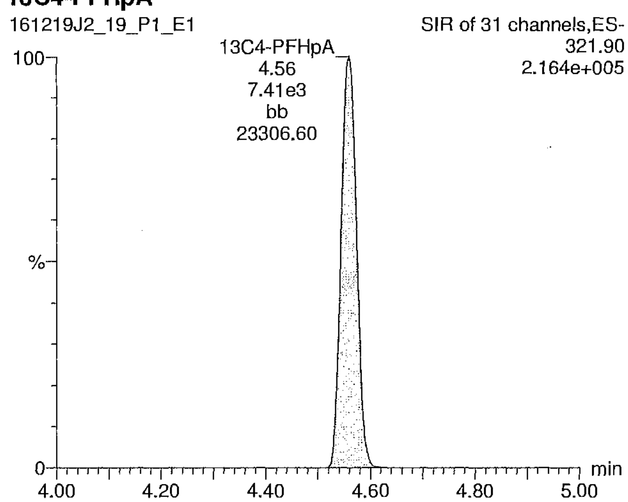
Total PFHxS



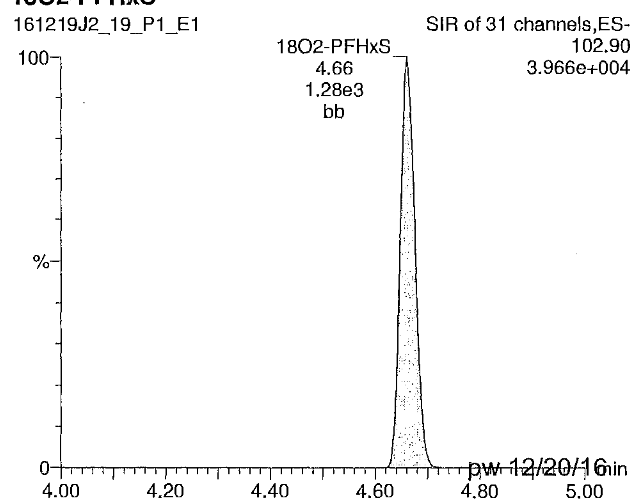
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



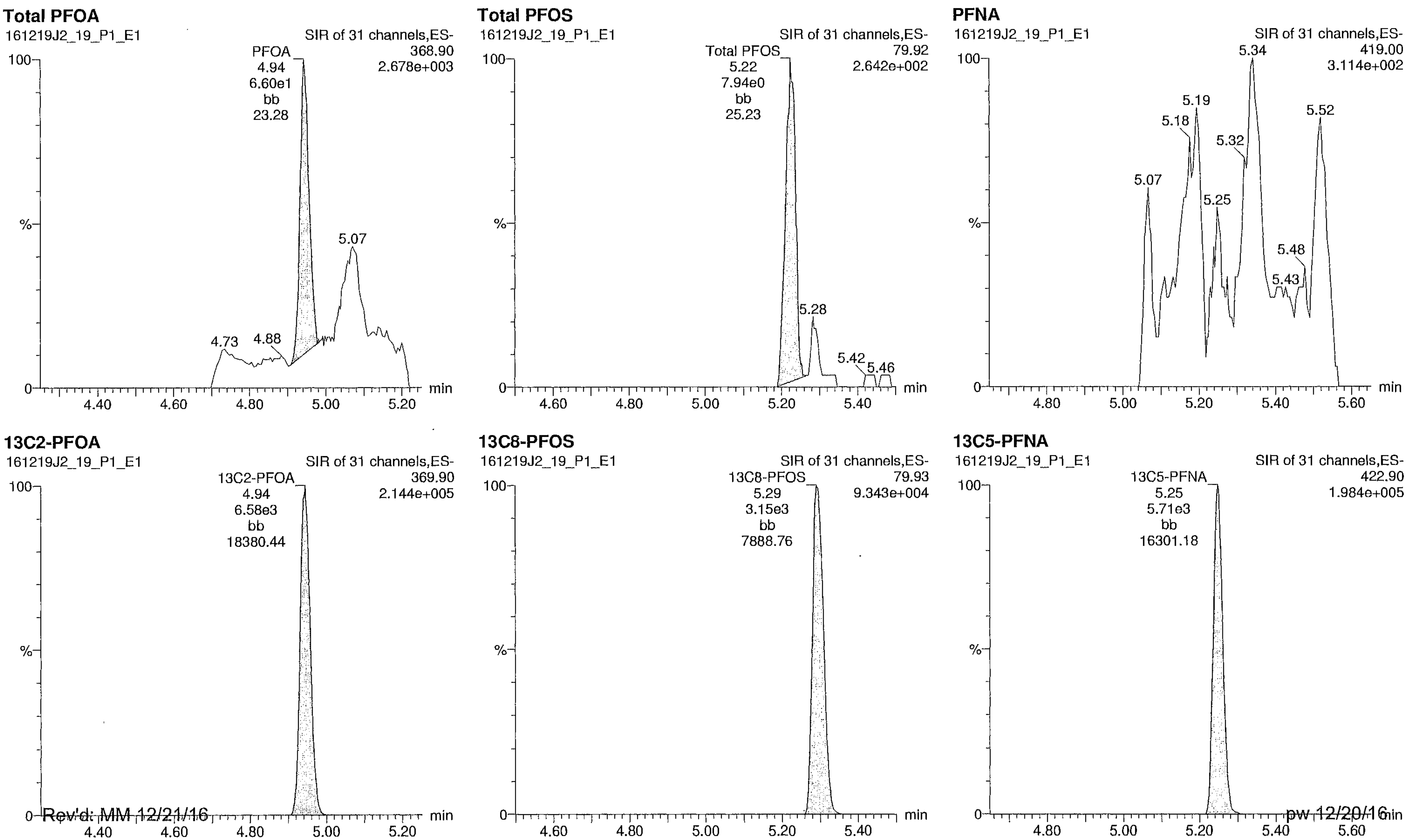
Rev'd: MM 12/21/16
pw 12/20/16

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_19.qld

Last Altered: Tuesday, December 20, 2016 16:50:42 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:51:12 Pacific Standard Time

ID: 1601554-02, Description: FB-DI Water, Name: 161219J2_19.wiff, Date: 19-Dec-2016, Time: 18:35:49, Instrument: , Lab: ©PE-SCIEX, User: sciex

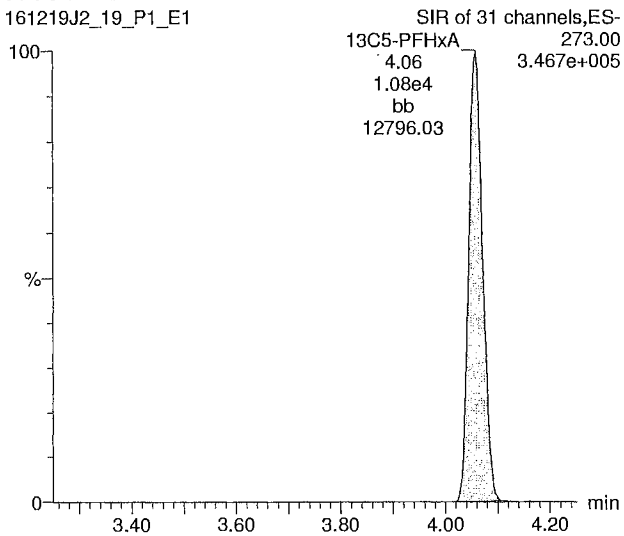


Dataset: U:\Q2.PRO\Results\161219J2\161219J2_19.qld

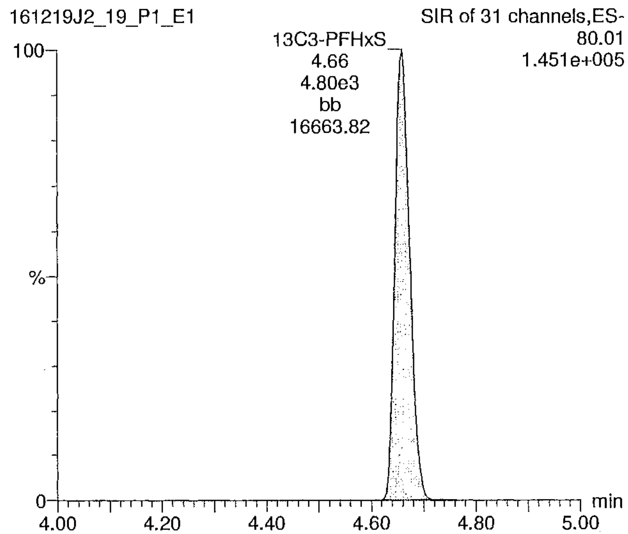
Last Altered: Tuesday, December 20, 2016 16:50:42 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:51:12 Pacific Standard Time

ID: 1601554-02, Description: FB-DI Water, Name: 161219J2_19.wiff, Date: 19-Dec-2016, Time: 18:35:49, Instrument: , Lab: ©PE-SCIEX, User: sciex

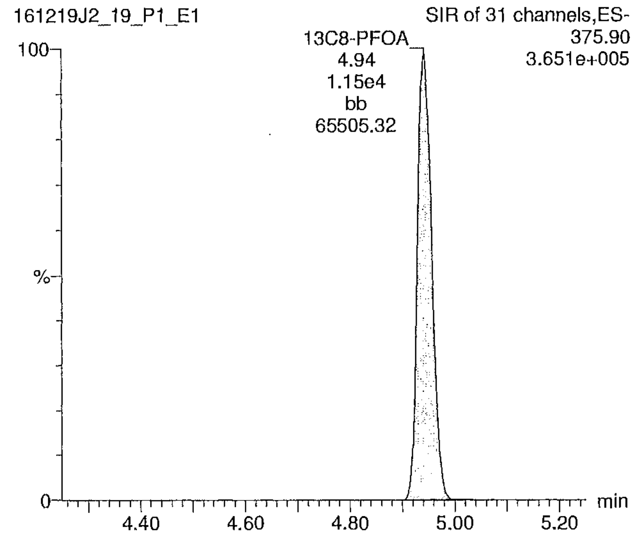
13C5-PFHxA



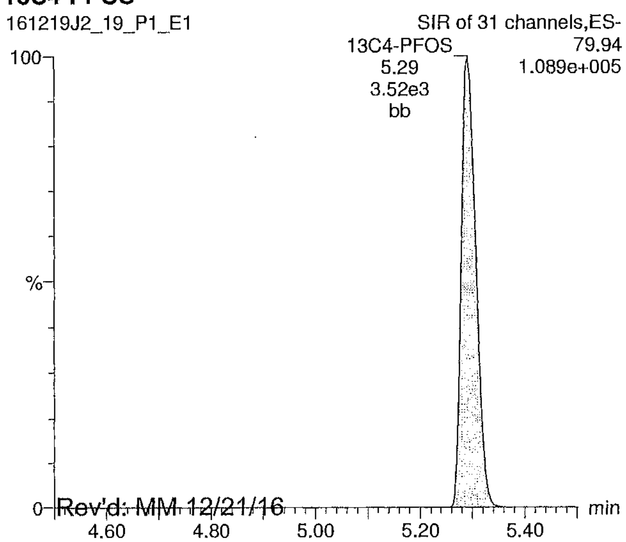
13C3-PFHxS



13C8-PFOA

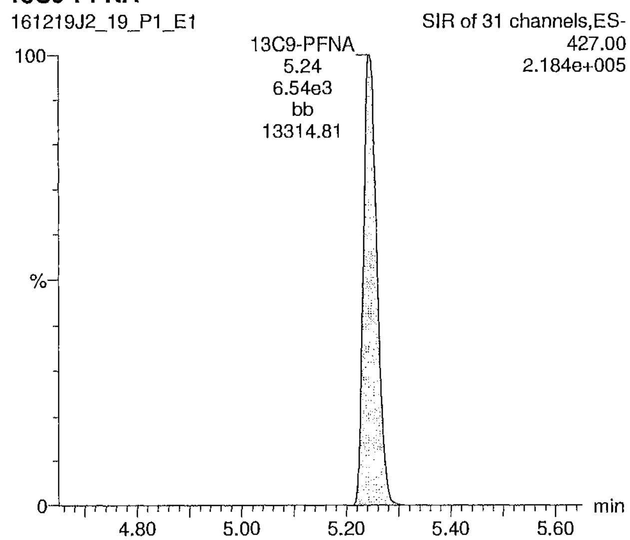


13C4-PFOS



Rev'd: MM 12/21/16

13C9-PFNA



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Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_20.qld

Last Altered: Tuesday, December 20, 2016 16:53:32 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:53:59 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: 1601554-03, Description: GW-FPC-3A, Name: 161219J2_20.wiff, Date: 19-Dec-2016, Time: 18:48:04

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	79.90		6.524e3		0.130			
2	5 PFHpA	318.90		8.293e3		0.130			
3	6 PFHxS	79.91	1.448e1	1.345e3		0.130	4.67		
4	8 PFOA	368.90	8.187e1	7.414e3		0.130	4.95		
5	9 PFNA	419.00		6.281e3		0.130			
6	10 PFOS	79.92		4.203e3		0.130			
7	15 13C3-PFBS	79.95	6.524e3	1.128e4	0.518	0.130	3.71	107	112
8	16 13C2-PFHxA	269.90	4.046e3	1.128e4	0.920	0.130	4.07	37.3	97.4
9	17 13C4-PFHpA	321.90	8.293e3	1.128e4	0.839	0.130	4.56	83.9	87.6
10	18 18O2-PFHxS	102.90	1.345e3	5.304e3	0.279	0.130	4.67	87.2	91.0
11	19 13C2-6:2 FTS	408.90	1.862e3	1.262e4	0.177	0.130	4.91	79.9	83.4
12	20 13C2-PFOA	369.90	7.414e3	1.262e4	0.665	0.130	4.94	84.6	88.3
13	21 13C5-PFNA	422.90	6.281e3	7.300e3	0.958	0.130	5.25	86.1	89.8
14	22 13C8-PFOS	79.93	4.203e3	4.756e3	0.950	0.130	5.29	89.1	93.0
15	25 13C4-PFBA	171.90	1.151e4	1.151e4	1.000	0.130	2.37	95.8	100
16	26 13C5-PFHxA	273.00	1.128e4	1.128e4	1.000	0.130	4.07	95.8	100
17	27 13C3-PFHxS	80.01	5.304e3	5.304e3	1.000	0.130	4.67	95.8	100
18	28 13C8-PFOA	375.90	1.262e4	1.262e4	1.000	0.130	4.94	95.8	100
19	29 13C9-PFNA	427.00	7.300e3	7.300e3	1.000	0.130	5.25	95.8	100
20	30 13C4-PFOS	79.94	4.756e3	4.756e3	1.000	0.130	5.29	95.8	100
21	31 13C6-PFDA	474.00	8.626e3	8.626e3	1.000	0.130	5.43	95.8	100
22	32 Total PFBS	79.90		6.524e3		0.130			
23	33 Total PFHxS	79.91		1.345e3		0.130			
24	34 Total PFOA	368.90		7.414e3		0.130			
25	35 Total PFOS	79.92		4.203e3		0.130		0.520	

Rev'd: MM 12/21/16 pw 12/20/16

Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

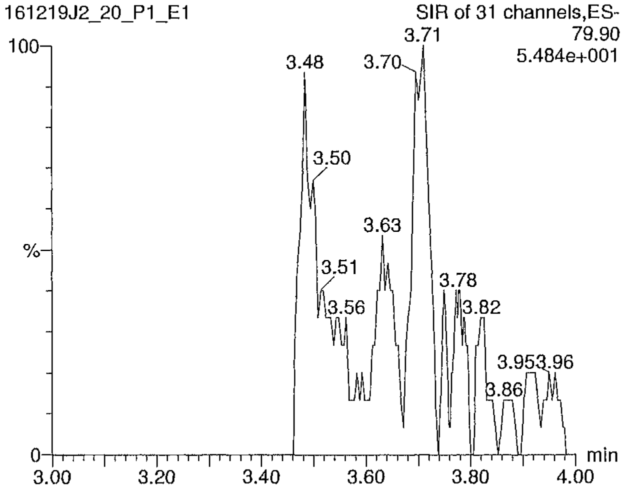
Dataset: U:\Q2.PRO\Results\161219J2\161219J2_20.qld

Last Altered: Tuesday, December 20, 2016 16:53:32 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:53:59 Pacific Standard Time

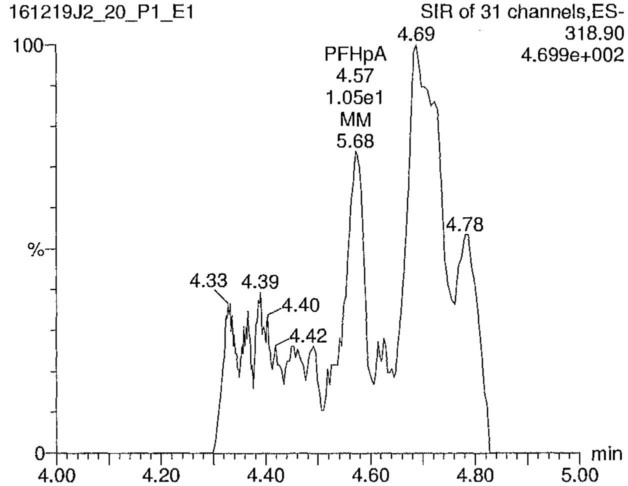
Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: 1601554-03, Description: GW-FPC-3A, Name: 161219J2_20.wiff, Date: 19-Dec-2016, Time: 18:48:04, Instrument: , Lab: ©PE-SCIEX, User: sciex

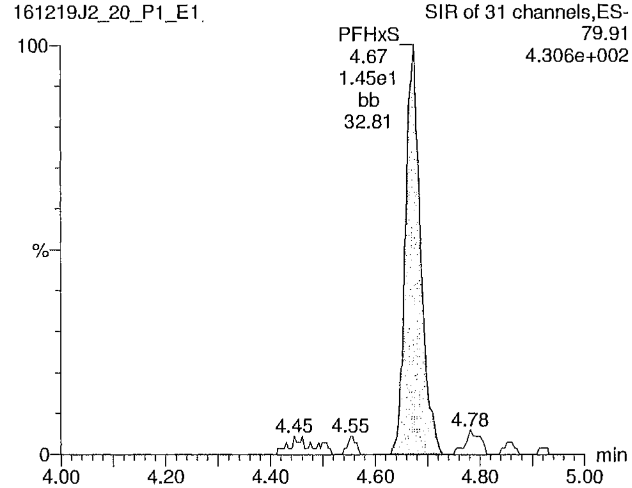
Total PFBS
161219J2_20_P1_E1



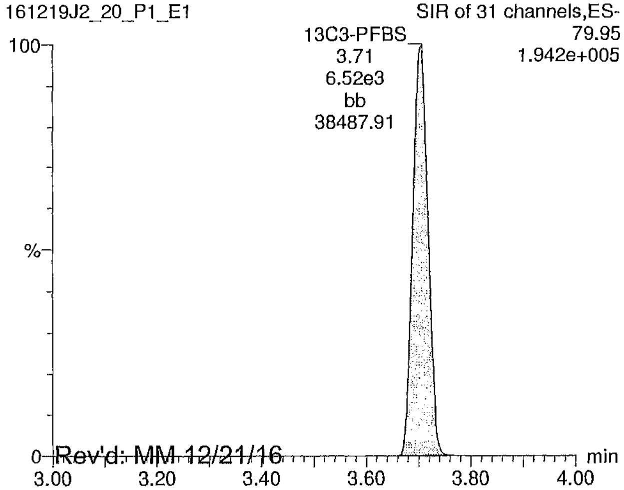
PFHpA
161219J2_20_P1_E1



Total PFHxS
161219J2_20_P1_E1

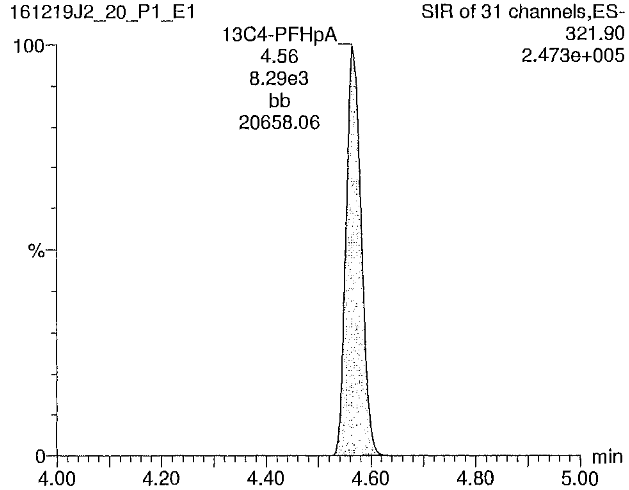


13C3-PFBS
161219J2_20_P1_E1

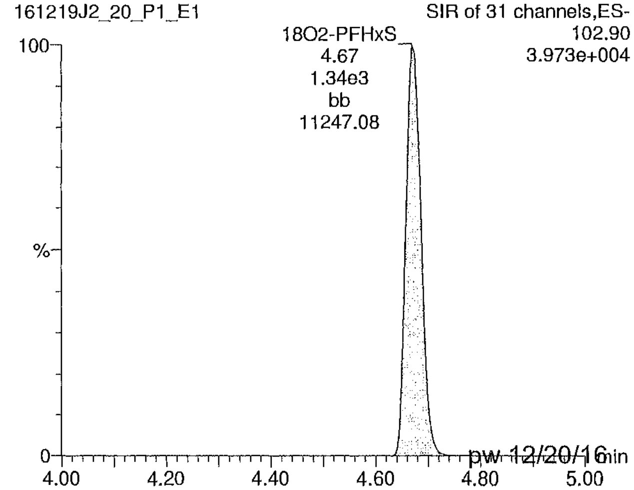


Rev'd: MM 12/21/16

13C4-PFHpA
161219J2_20_P1_E1



18O2-PFHxS
161219J2_20_P1_E1



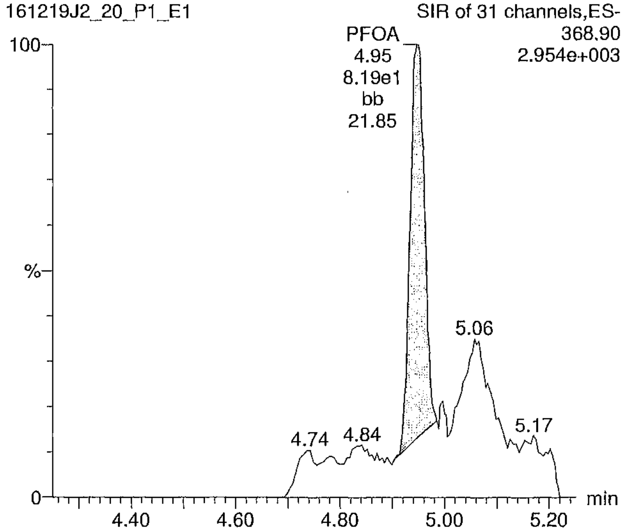
pw 12/20/16

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_20.qld

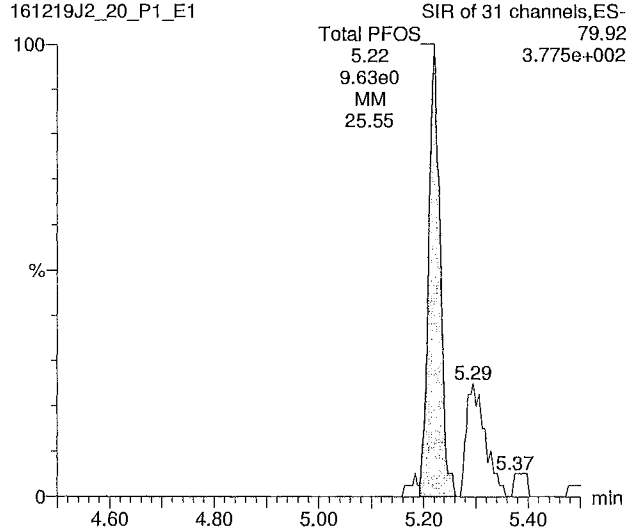
Last Altered: Tuesday, December 20, 2016 16:53:32 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:53:59 Pacific Standard Time

ID: 1601554-03, Description: GW-FPC-3A, Name: 161219J2_20.wiff, Date: 19-Dec-2016, Time: 18:48:04, Instrument: , Lab: ©PE-SCIEX, User: sciex

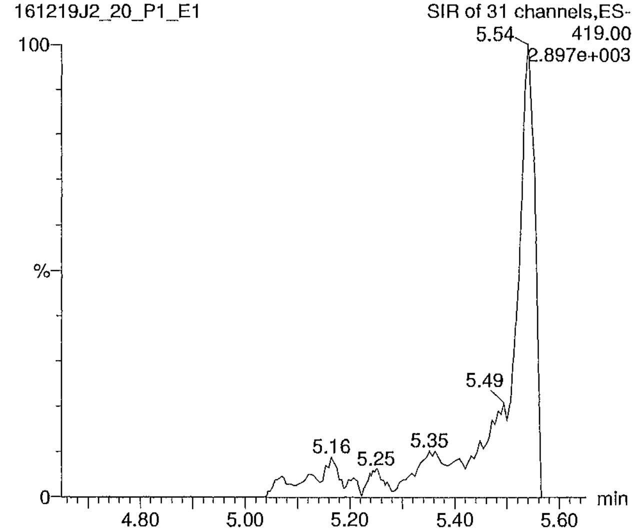
Total PFOA



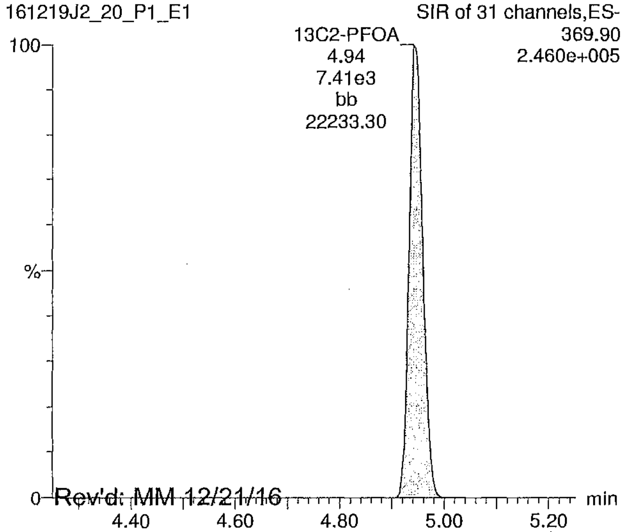
Total PFOS



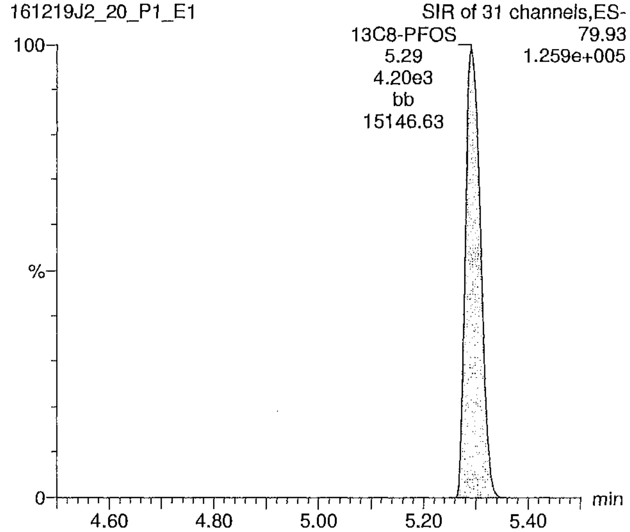
PFNA



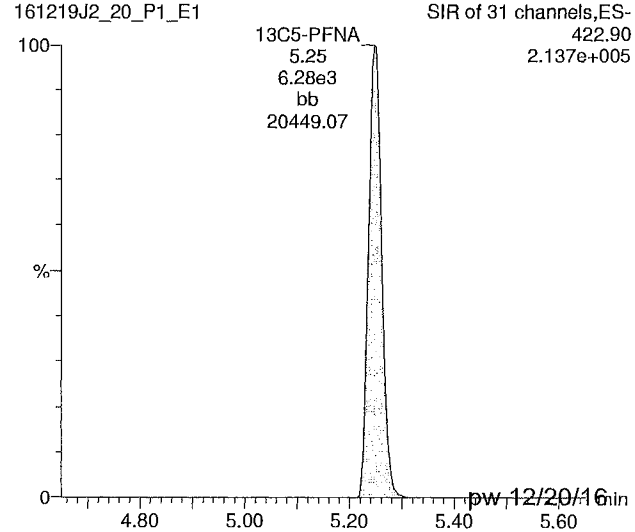
13C2-PFOA



13C8-PFOS



13C5-PFNA



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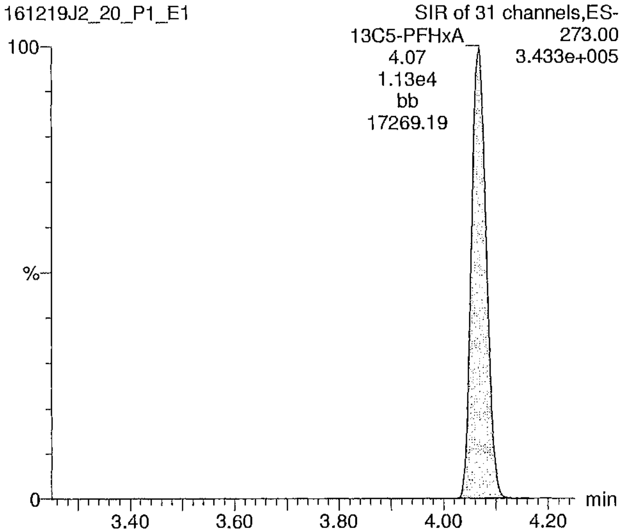
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_20.qld

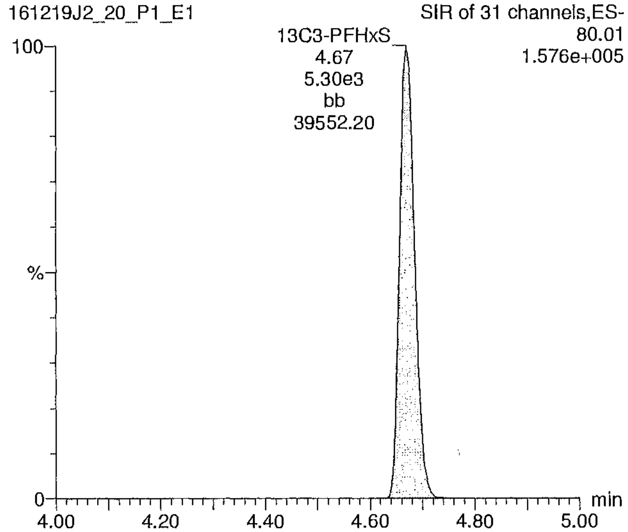
Last Altered: Tuesday, December 20, 2016 16:53:32 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:53:59 Pacific Standard Time

ID: 1601554-03, Description: GW-FPC-3A, Name: 161219J2_20.wiff, Date: 19-Dec-2016, Time: 18:48:04, Instrument: , Lab: ©PE-SCIEX, User: sciex

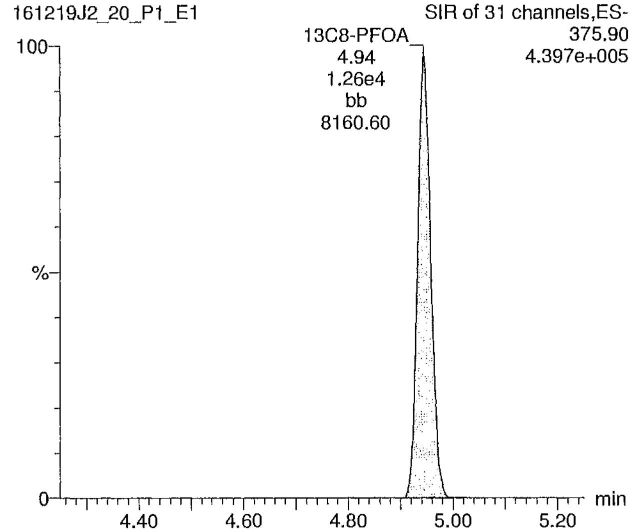
13C5-PFHxA



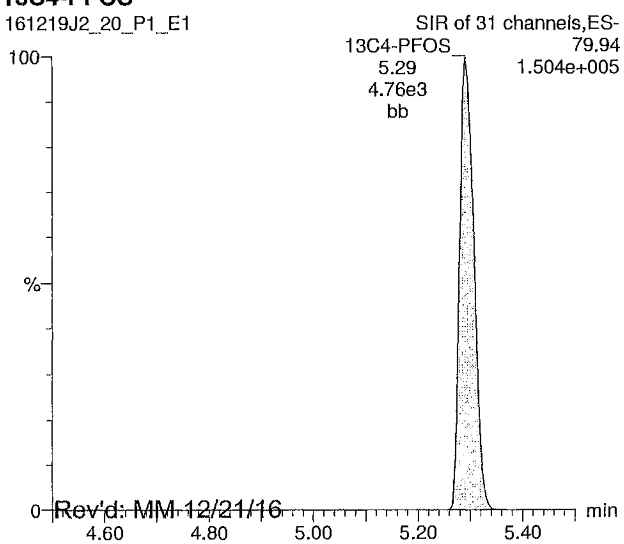
13C3-PFHxS



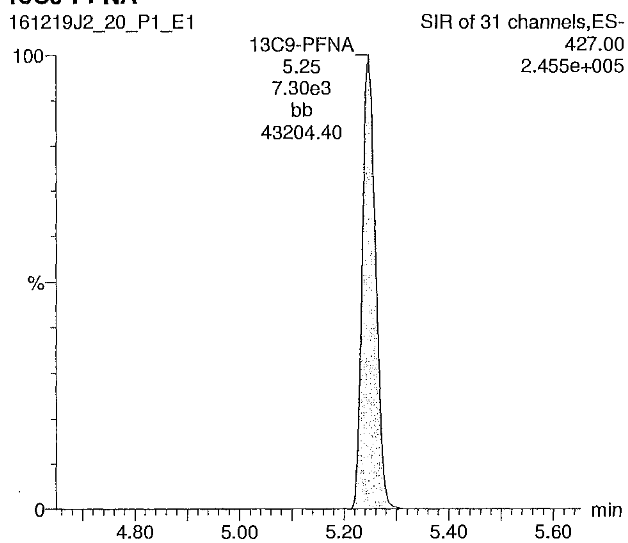
13C8-PFOA



13C4-PFOS



13C9-PFNA



~~Rev'd: MM 12/21/16~~

pw 12/20/16

Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_24.qld

Last Altered: Tuesday, December 20, 2016 17:10:36 Pacific Standard Time
Printed: Tuesday, December 20, 2016 17:11:11 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: B6L0076-MS1, Description: Matrix Spike, Name: 161219J2_24.wiff, Date: 19-Dec-2016, Time: 19:37:00

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	79.90	4.092e3	6.204e3		0.124	3.70	83.3	
2	5 PFHpA	318.90	5.646e3	8.313e3		0.124	4.58	85.9	
3	6 PFHxS	79.91	2.863e3	1.277e3		0.124	4.69	88.2	
4	8 PFOA	368.90	6.583e3	6.975e3		0.124	4.96	88.2	
5	9 PFNA	419.00	4.798e3	7.030e3		0.124	5.25	77.7	
6	10 PFOS	79.92	3.326e3	4.442e3		0.124	5.28	81.3	
7	15 13C3-PFBS	79.95	6.204e3	1.086e4	0.518	0.124	3.70	111	110
8	16 13C2-PFHxA	269.90	3.954e3	1.086e4	0.920	0.124	4.07	39.9	99.0
9	17 13C4-PFHpA	321.90	8.313e3	1.086e4	0.839	0.124	4.58	92.1	91.3
10	18 18O2-PFHxS	102.90	1.277e3	4.904e3	0.279	0.124	4.69	94.3	93.5
11	19 13C2-6:2 FTS	408.90	1.810e3	1.169e4	0.177	0.124	4.92	88.2	87.5
12	20 13C2-PFOA	369.90	6.975e3	1.169e4	0.665	0.124	4.96	90.4	89.6
13	21 13C5-PFNA	422.90	7.030e3	7.936e3	0.958	0.124	5.25	93.3	92.5
14	22 13C8-PFOS	79.93	4.442e3	4.849e3	0.950	0.124	5.28	97.3	96.5
15	25 13C4-PFBA	171.90	1.121e4	1.121e4	1.000	0.124	2.36	101	100
16	26 13C5-PFHxA	273.00	1.086e4	1.086e4	1.000	0.124	4.07	101	100
17	27 13C3-PFHxS	80.01	4.904e3	4.904e3	1.000	0.124	4.69	101	100
18	28 13C8-PFOA	375.90	1.169e4	1.169e4	1.000	0.124	4.96	101	100
19	29 13C9-PFNA	427.00	7.936e3	7.936e3	1.000	0.124	5.25	101	100
20	30 13C4-PFOS	79.94	4.849e3	4.849e3	1.000	0.124	5.28	101	100
21	31 13C6-PFDA	474.00	8.679e3	8.679e3	1.000	0.124	5.39	101	100
22	32 Total PFBS	79.90		6.204e3		0.124		83.3	
23	33 Total PFHxS	79.91		1.277e3		0.124		105	
24	34 Total PFOA	368.90		6.975e3		0.124		88.2	
25	35 Total PFOS	79.92		4.442e3		0.124		106	

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Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

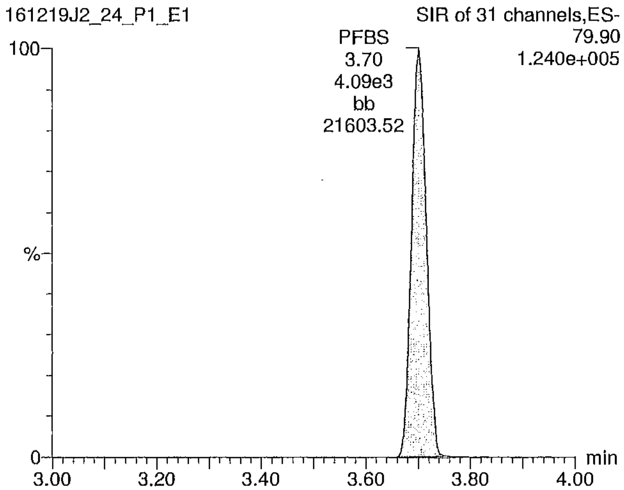
Dataset: U:\Q2.PRO\Results\161219J2\161219J2_24.qld

Last Altered: Tuesday, December 20, 2016 17:10:36 Pacific Standard Time
Printed: Tuesday, December 20, 2016 17:11:11 Pacific Standard Time

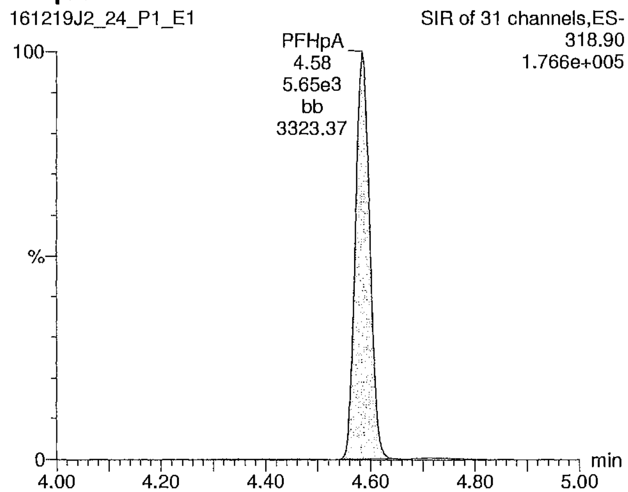
Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: B6L0076-MS1, Description: Matrix Spike, Name: 161219J2_24.wiff, Date: 19-Dec-2016, Time: 19:37:00, Instrument: , Lab: ©PE-SCIEX, User: sciex

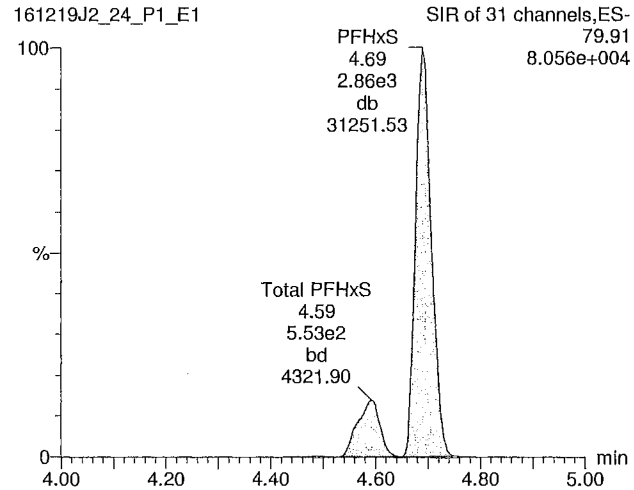
Total PFBS



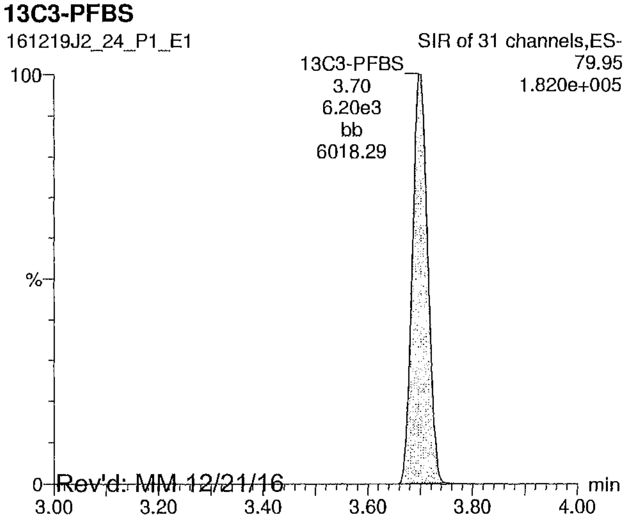
PFHpA



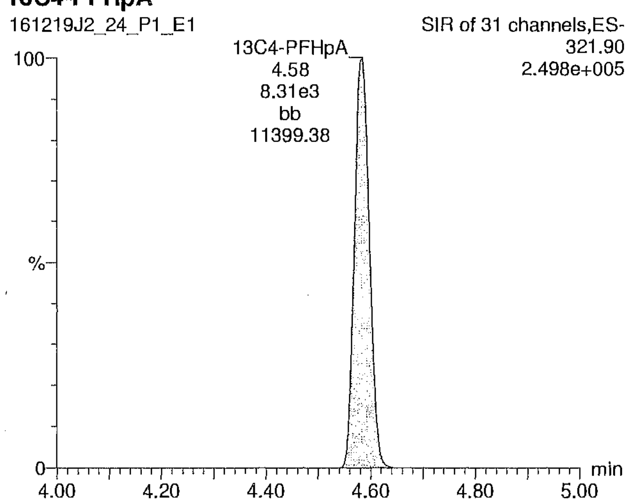
Total PFHxS



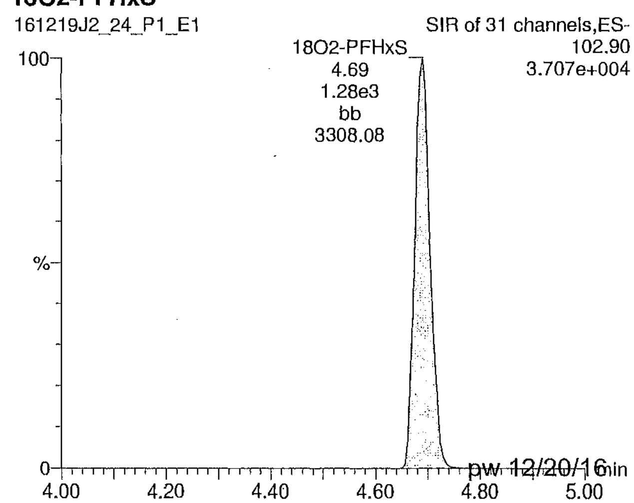
13C3-PFBS



13C4-PFHpA



18O2-PFHxS

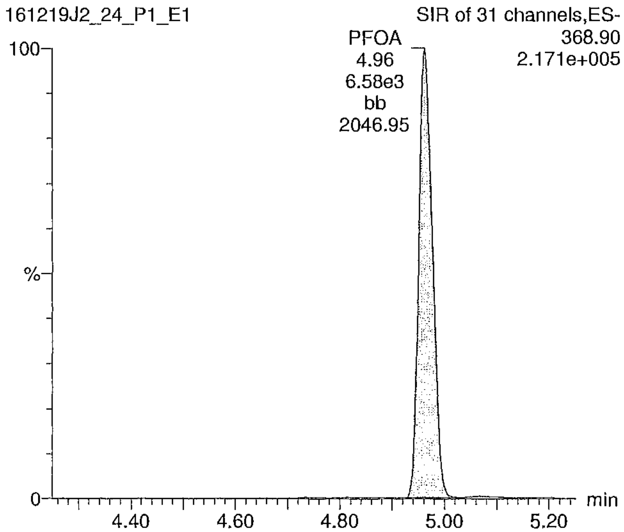


Dataset: U:\Q2.PRO\Results\161219J2\161219J2_24.qld

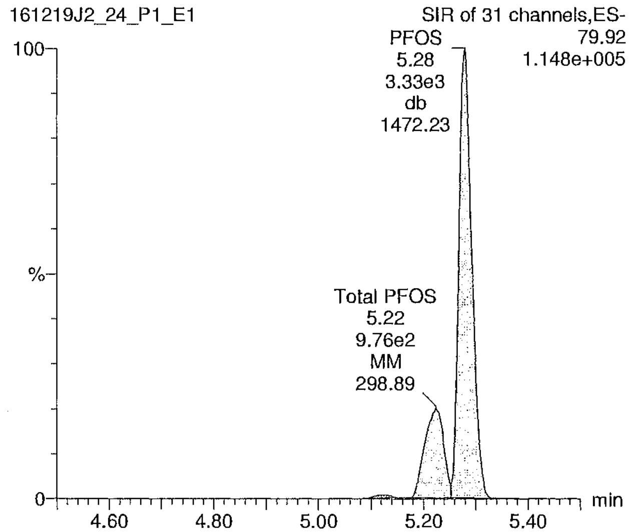
Last Altered: Tuesday, December 20, 2016 17:10:36 Pacific Standard Time
Printed: Tuesday, December 20, 2016 17:11:11 Pacific Standard Time

ID: B6L0076-MS1, Description: Matrix Spike, Name: 161219J2_24.wiff, Date: 19-Dec-2016, Time: 19:37:00, Instrument: , Lab: ©PE-SCIEX, User: sciex

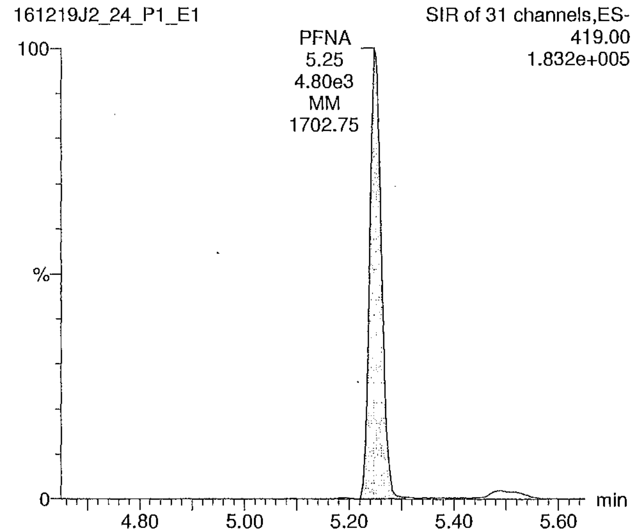
Total PFOA



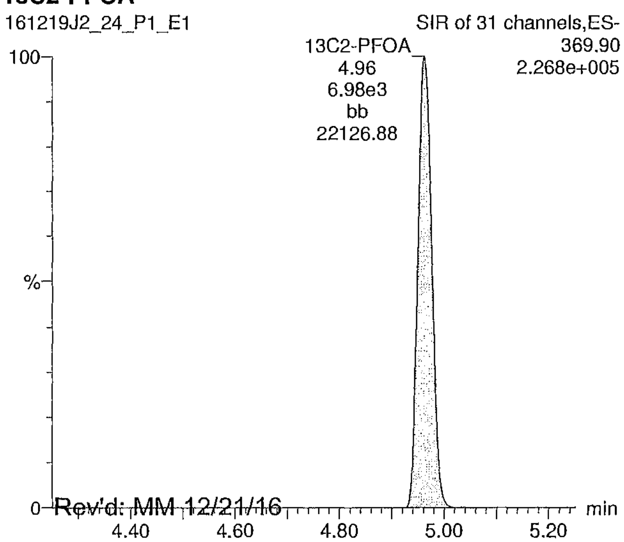
Total PFOS



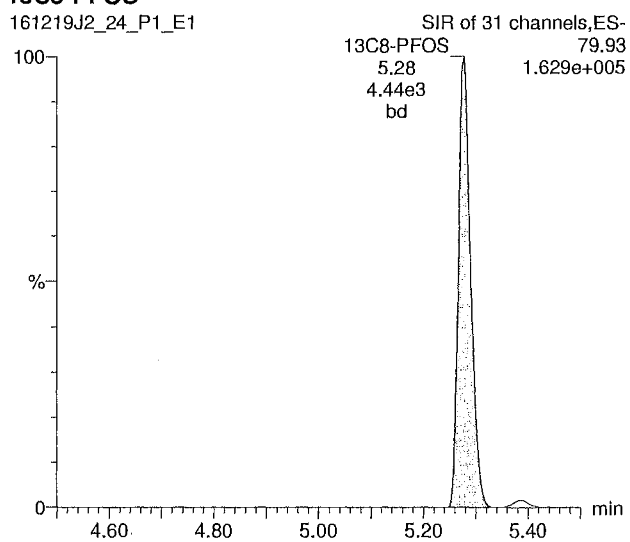
PFNA



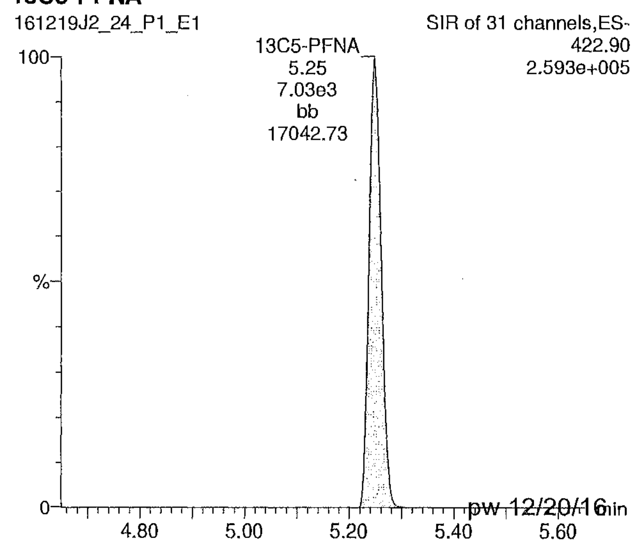
13C2-PFOA



13C8-PFOS



13C5-PFNA



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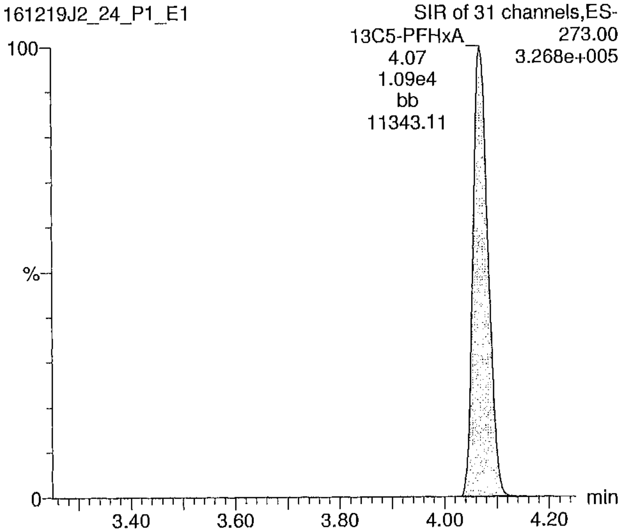
Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_24.qld

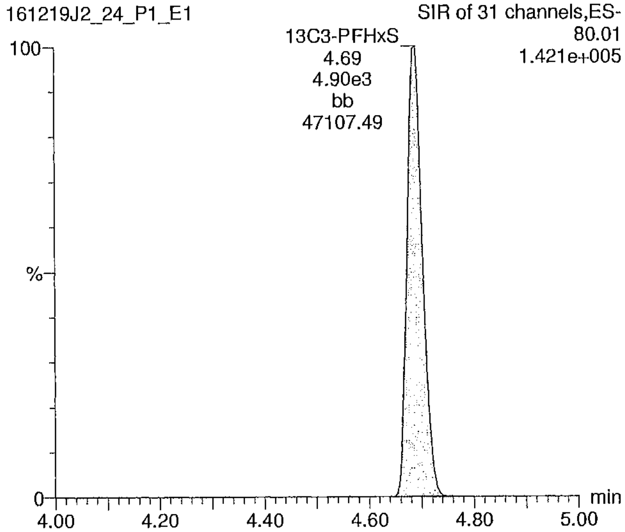
Last Altered: Tuesday, December 20, 2016 17:10:36 Pacific Standard Time
Printed: Tuesday, December 20, 2016 17:11:11 Pacific Standard Time

ID: B6L0076-MS1, Description: Matrix Spike, Name: 161219J2_24.wiff, Date: 19-Dec-2016, Time: 19:37:00, Instrument: , Lab: ©PE-SCIEX, User: sciex

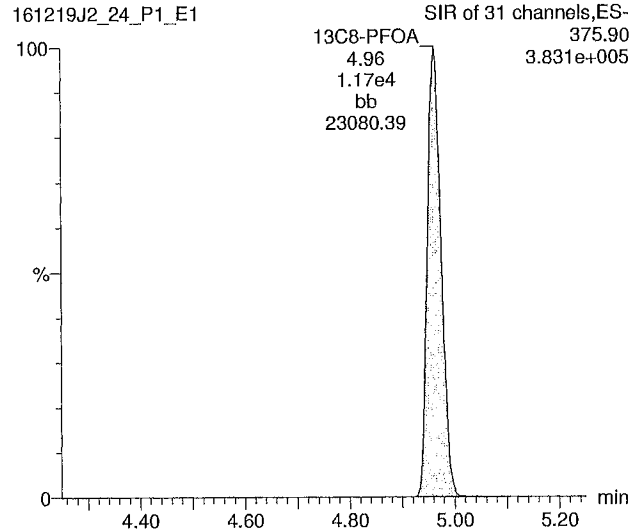
13C5-PFHxA



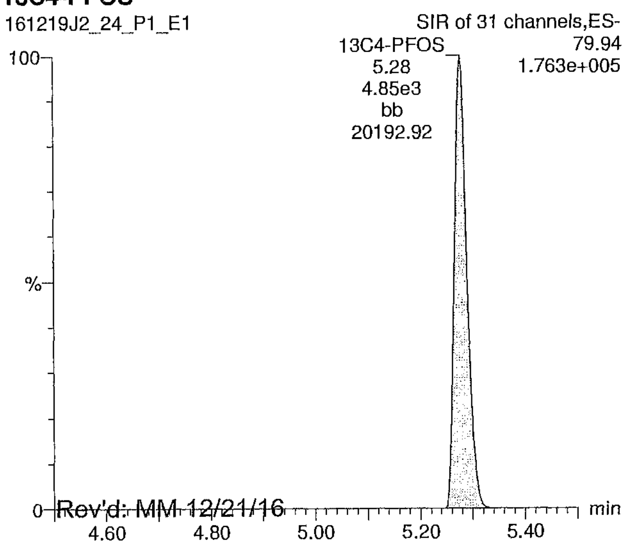
13C3-PFHxS



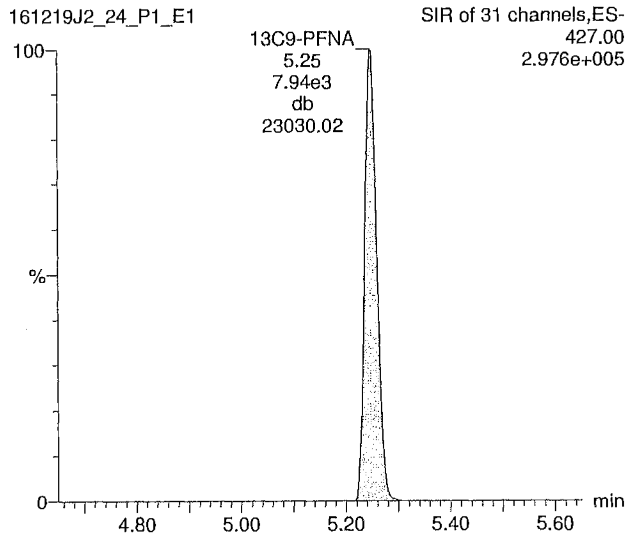
13C8-PFOA



13C4-PFOS



13C9-PFNA



~~Rev'd: MM 12/21/16~~

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Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_25.qld

Last Altered: Tuesday, December 20, 2016 17:08:16 Pacific Standard Time
Printed: Tuesday, December 20, 2016 17:08:53 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: B6L0076-MSD1, Description: Matrix Spike Dup, Name: 161219J2_25.wiff, Date: 19-Dec-2016, Time: 19:49:14

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	79.90	4.700e3	6.571e3		0.121	3.70	92.6	
2	5 PFHpA	318.90	6.360e3	8.197e3		0.121	4.54	101	
3	6 PFHxS	79.91	2.825e3	1.317e3		0.121	4.65	86.5	
4	8 PFOA	368.90	7.153e3	6.626e3		0.121	4.94	104	
5	9 PFNA	419.00	4.281e3	5.882e3		0.121	5.26	85.0	
6	10 PFOS	79.92	2.562e3	3.403e3		0.121	5.30	83.7	
7	15 13C3-PFBS	79.95	6.571e3	1.114e4	0.518	0.121	3.70	118	114
8	16 13C2-PFHxA	269.90	3.940e3	1.114e4	0.920	0.121	4.05	39.7	96.1
9	17 13C4-PFHpA	321.90	8.197e3	1.114e4	0.839	0.121	4.54	90.7	87.7
10	18 18O2-PFHxS	102.90	1.317e3	5.001e3	0.279	0.121	4.65	97.7	94.6
11	19 13C2-6:2 FTS	408.90	1.901e3	1.101e4	0.177	0.121	4.90	101	97.6
12	20 13C2-PFOA	369.90	6.626e3	1.101e4	0.665	0.121	4.93	93.5	90.4
13	21 13C5-PFNA	422.90	5.882e3	6.721e3	0.958	0.121	5.26	94.5	91.4
14	22 13C8-PFOS	79.93	3.403e3	3.871e3	0.950	0.121	5.30	95.7	92.6
15	25 13C4-PFBA	171.90	1.172e4	1.172e4	1.000	0.121	2.36	103	100
16	26 13C5-PFHxA	273.00	1.114e4	1.114e4	1.000	0.121	4.05	103	100
17	27 13C3-PFHxS	80.01	5.001e3	5.001e3	1.000	0.121	4.64	103	100
18	28 13C8-PFOA	375.90	1.101e4	1.101e4	1.000	0.121	4.93	103	100
19	29 13C9-PFNA	427.00	6.721e3	6.721e3	1.000	0.121	5.25	103	100
20	30 13C4-PFOS	79.94	3.871e3	3.871e3	1.000	0.121	5.30	103	100
21	31 13C6-PFDA	474.00	6.332e3	6.332e3	1.000	0.121	5.51	103	100
22	32 Total PFBS	79.90		6.571e3		0.121		92.6	
23	33 Total PFHxS	79.91		1.317e3		0.121		105	
24	34 Total PFOA	368.90		6.626e3		0.121		104	
25	35 Total PFOS	79.92		3.403e3		0.121		115	

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Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

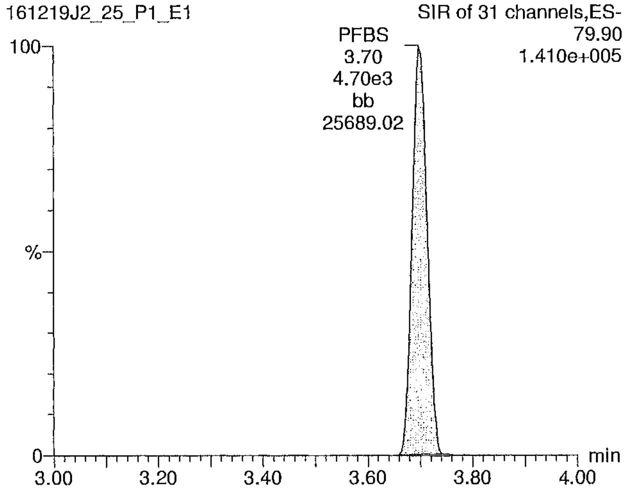
Dataset: U:\Q2.PRO\Results\161219J2\161219J2_25.qld

Last Altered: Tuesday, December 20, 2016 17:08:16 Pacific Standard Time
Printed: Tuesday, December 20, 2016 17:08:53 Pacific Standard Time

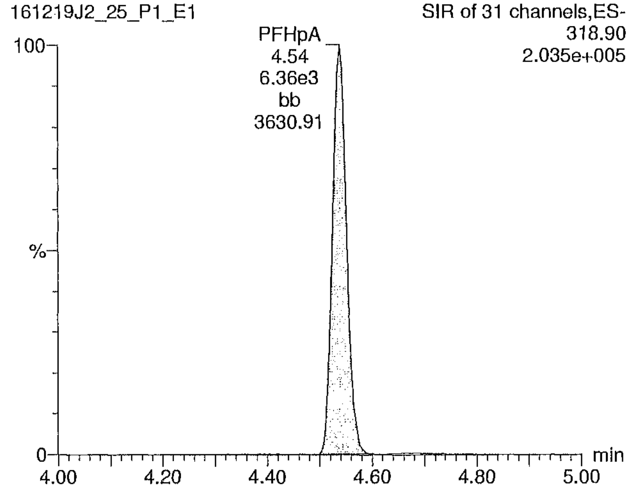
Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: B6L0076-MSD1, Description: Matrix Spike Dup, Name: 161219J2_25.wiff, Date: 19-Dec-2016, Time: 19:49:14, Instrument: , Lab: ©PE-SCIEX, User: sciex

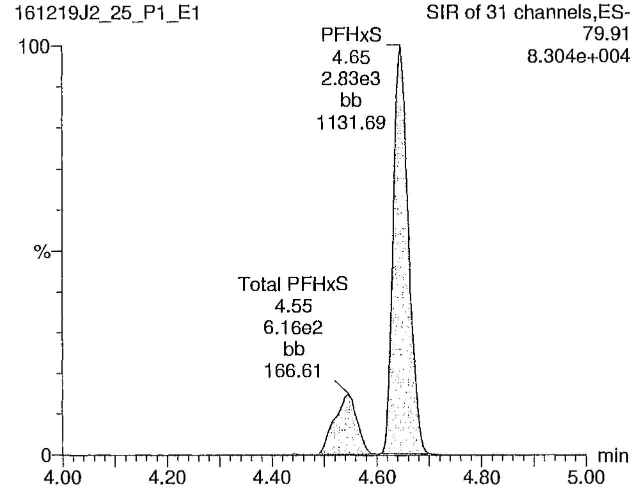
Total PFBS



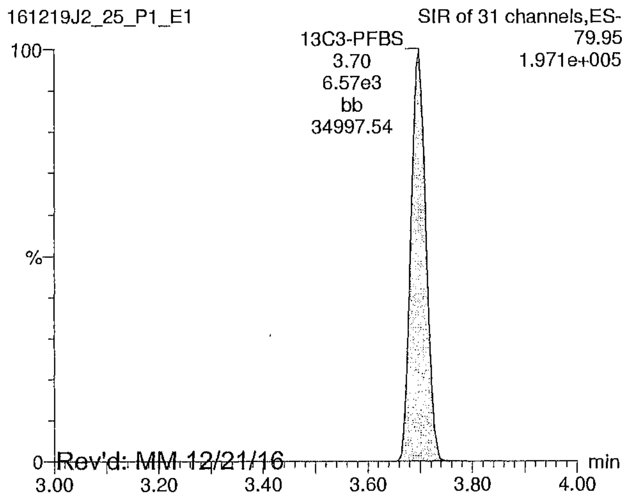
PFHpA



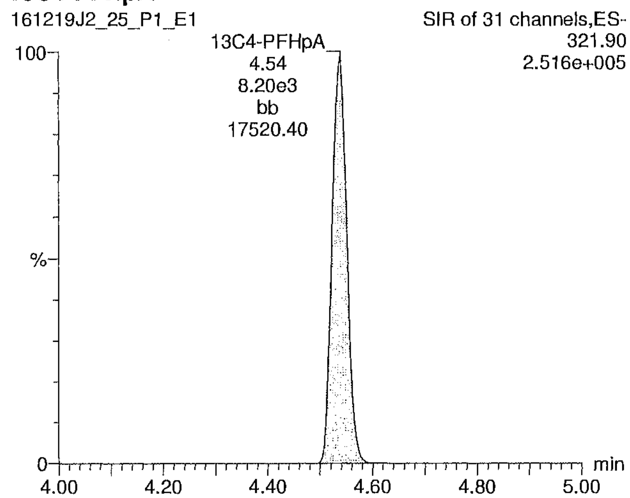
Total PFHxS



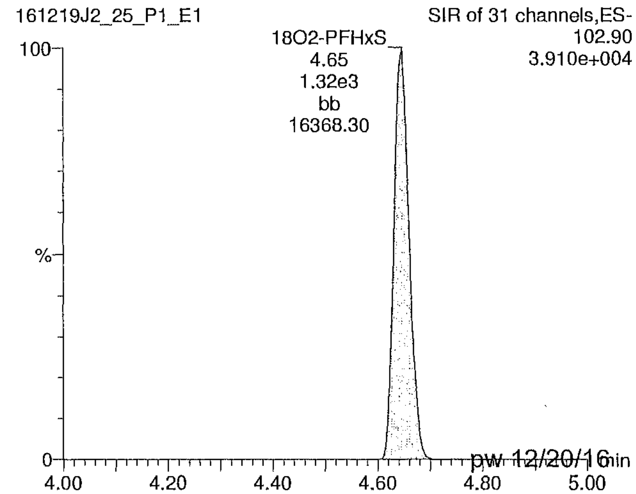
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



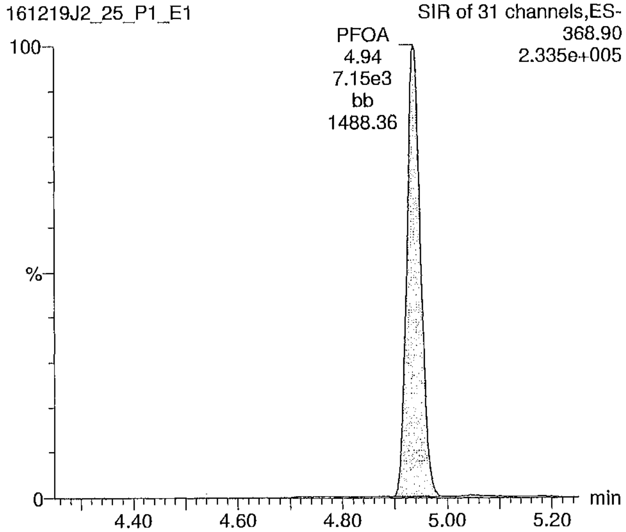
Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_25.qld

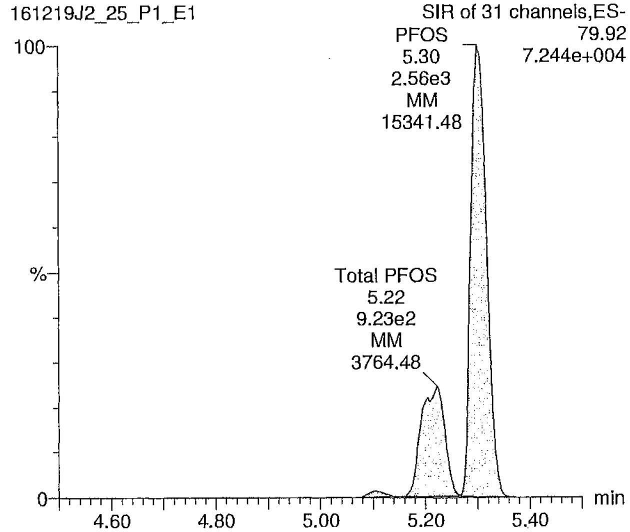
Last Altered: Tuesday, December 20, 2016 17:08:16 Pacific Standard Time
Printed: Tuesday, December 20, 2016 17:08:53 Pacific Standard Time

ID: B6L0076-MSD1, Description: Matrix Spike Dup, Name: 161219J2_25.wiff, Date: 19-Dec-2016, Time: 19:49:14, Instrument: , Lab: ©PE-SCIEX, User: sciex

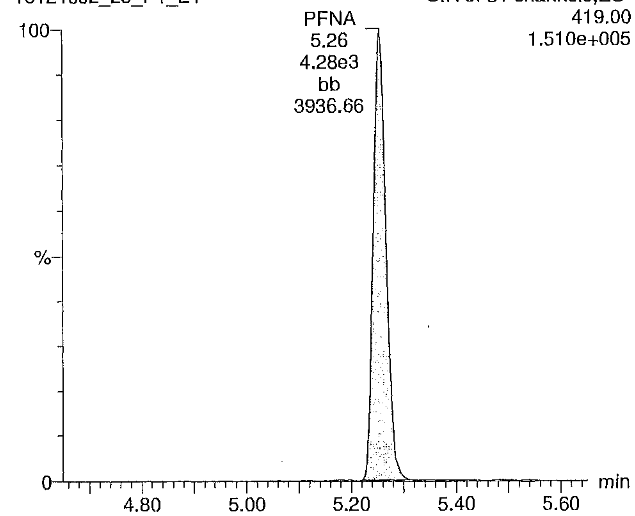
Total PFOA
161219J2_25_P1_E1



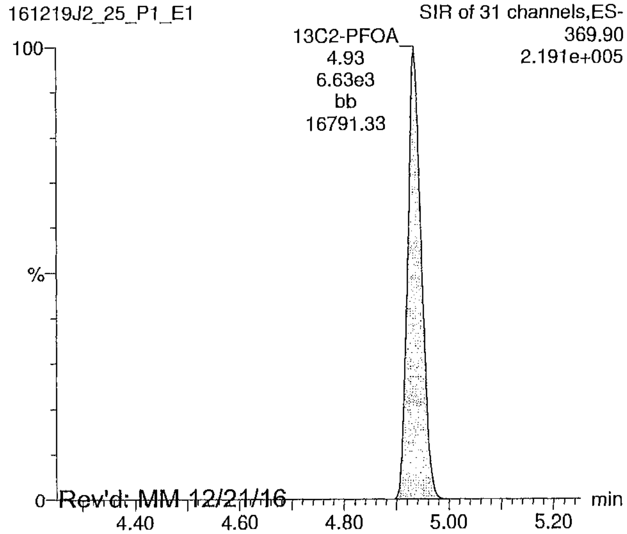
Total PFOS
161219J2_25_P1_E1



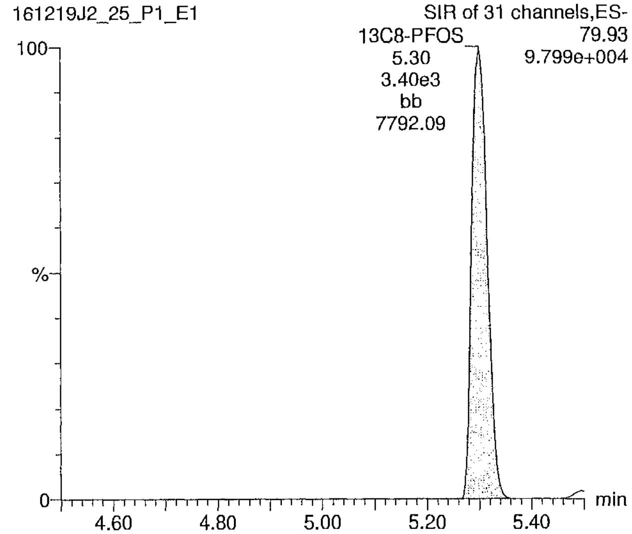
PFNA
161219J2_25_P1_E1



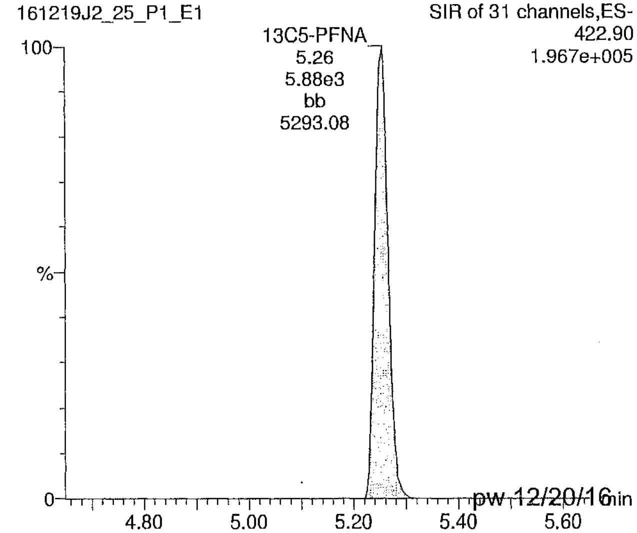
13C2-PFOA
161219J2_25_P1_E1



13C8-PFOS
161219J2_25_P1_E1



13C5-PFNA
161219J2_25_P1_E1

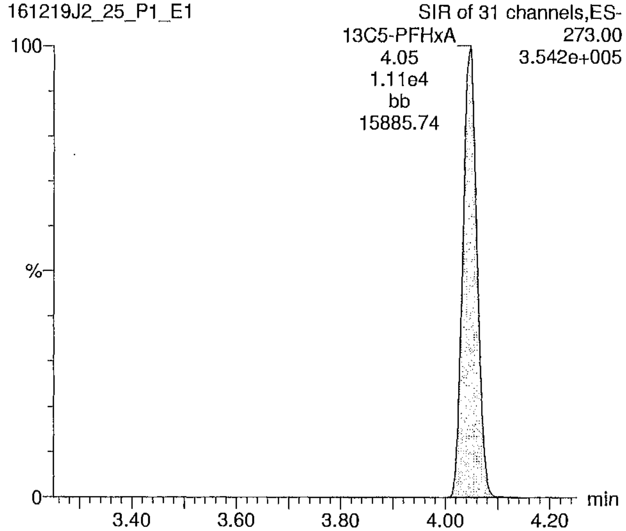


Dataset: U:\Q2.PRO\Results\161219J2\161219J2_25.qld

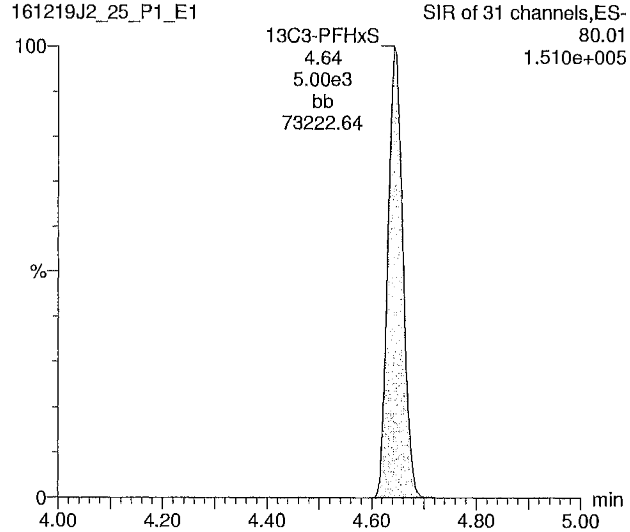
Last Altered: Tuesday, December 20, 2016 17:08:16 Pacific Standard Time
Printed: Tuesday, December 20, 2016 17:08:53 Pacific Standard Time

ID: B6L0076-MSD1, Description: Matrix Spike Dup, Name: 161219J2_25.wiff, Date: 19-Dec-2016, Time: 19:49:14, Instrument: , Lab: ©PE-SCIEX, User: sciex

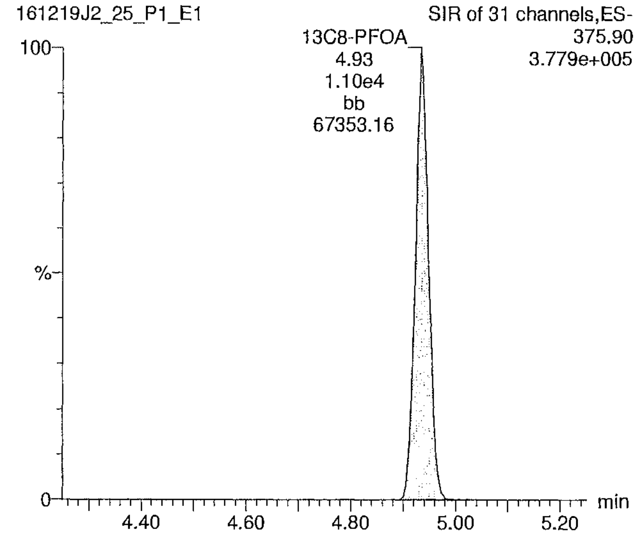
13C5-PFHxA



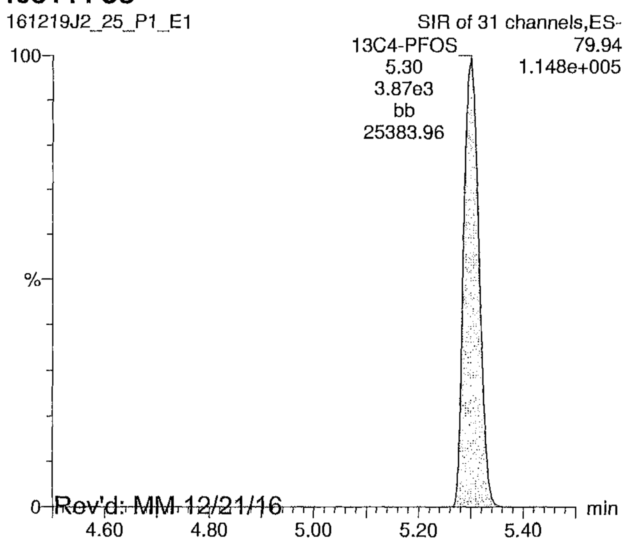
13C3-PFHxS



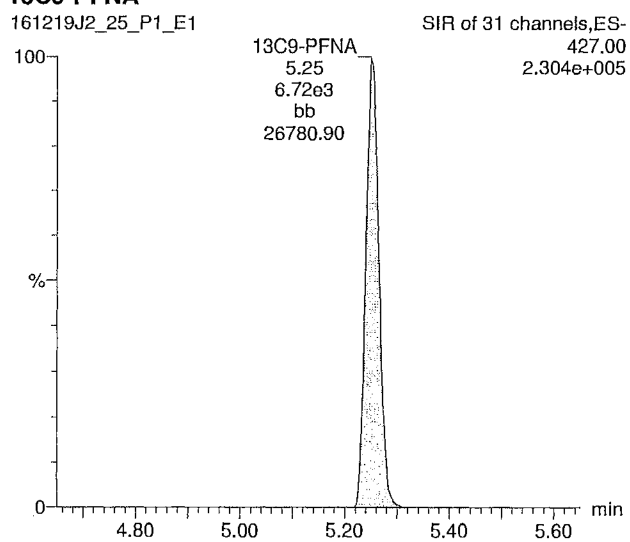
13C8-PFOA



13C4-PFOS



13C9-PFNA



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pw 12/20/16

Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_21.qld

Last Altered: Tuesday, December 20, 2016 16:56:34 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:57:08 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: 1601554-04, Description: GW-FPC-3B, Name: 161219J2_21.wiff, Date: 19-Dec-2016, Time: 19:00:17

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	79.90	3.328e0	5.750e3		0.124	3.70		
2	5 PFHpA	318.90	8.465e0	7.442e3		0.124	4.55		
3	6 PFHxS	79.91	1.449e1	1.265e3		0.124	4.66		
4	8 PFOA	368.90	7.178e1	6.544e3		0.124	4.93		
5	9 PFNA	419.00		5.702e3		0.124			
6	10 PFOS	79.92	1.571e0	3.623e3		0.124	5.30	0.348	
7	15 13C3-PFBS	79.95	5.750e3	1.051e4	0.518	0.124	3.70	106	106
8	16 13C2-PFHxA	269.90	3.668e3	1.051e4	0.920	0.124	4.05	38.1	94.9
9	17 13C4-PFHpA	321.90	7.442e3	1.051e4	0.839	0.124	4.55	84.8	84.4
10	18 18O2-PFHxS	102.90	1.265e3	4.882e3	0.279	0.124	4.65	93.4	93.0
11	19 13C2-6:2 FTS	408.90	1.841e3	1.054e4	0.177	0.124	4.89	99.2	98.7
12	20 13C2-PFOA	369.90	6.544e3	1.054e4	0.665	0.124	4.93	93.8	93.3
13	21 13C5-PFNA	422.90	5.702e3	6.724e3	0.958	0.124	5.25	89.0	88.6
14	22 13C8-PFOS	79.93	3.623e3	4.050e3	0.950	0.124	5.30	94.6	94.2
15	25 13C4-PFBA	171.90	1.094e4	1.094e4	1.000	0.124	2.36	100	100
16	26 13C5-PFHxA	273.00	1.051e4	1.051e4	1.000	0.124	4.05	100	100
17	27 13C3-PFHxS	80.01	4.882e3	4.882e3	1.000	0.124	4.65	100	100
18	28 13C8-PFOA	375.90	1.054e4	1.054e4	1.000	0.124	4.93	100	100
19	29 13C9-PFNA	427.00	6.724e3	6.724e3	1.000	0.124	5.25	100	100
20	30 13C4-PFOS	79.94	4.050e3	4.050e3	1.000	0.124	5.30	100	100
21	31 13C6-PFDA	474.00	7.079e3	7.079e3	1.000	0.124	5.51	100	100
22	32 Total PFBS	79.90		5.750e3		0.124			
23	33 Total PFHxS	79.91		1.265e3		0.124			
24	34 Total PFOA	368.90		6.544e3		0.124			
25	35 Total PFOS	79.92		3.623e3		0.124		1.00	

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pw 12/20/16

Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

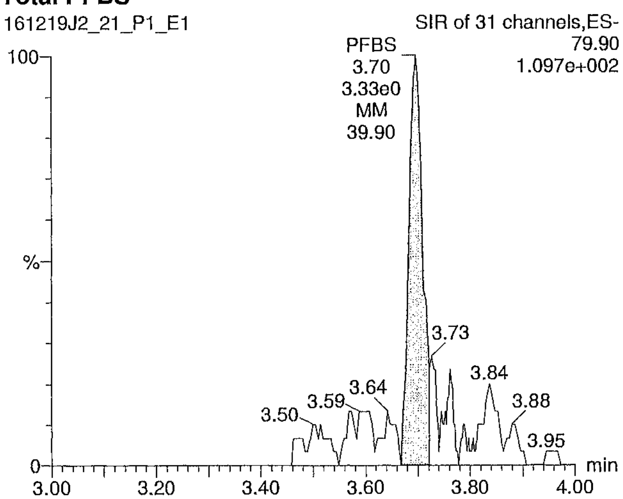
Dataset: U:\Q2.PRO\Results\161219J2\161219J2_21.qld

Last Altered: Tuesday, December 20, 2016 16:56:34 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:57:08 Pacific Standard Time

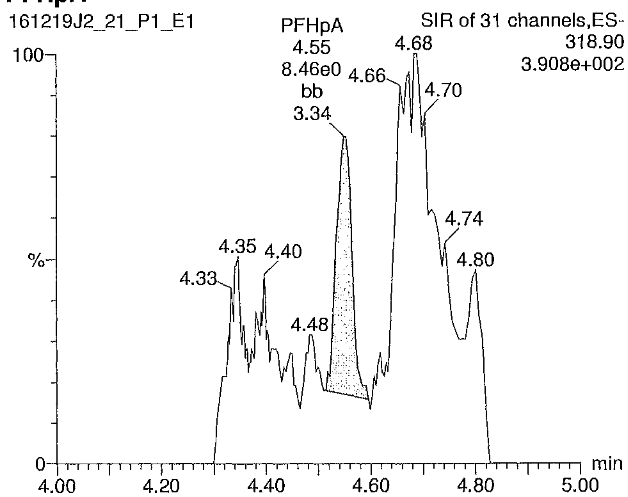
Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: 1601554-04, Description: GW-FPC-3B, Name: 161219J2_21.wiff, Date: 19-Dec-2016, Time: 19:00:17, Instrument: , Lab: ©PE-SCIEX, User: sciex

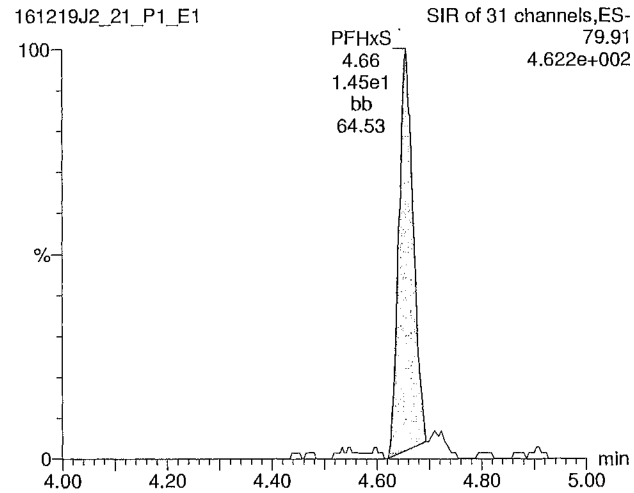
Total PFBS



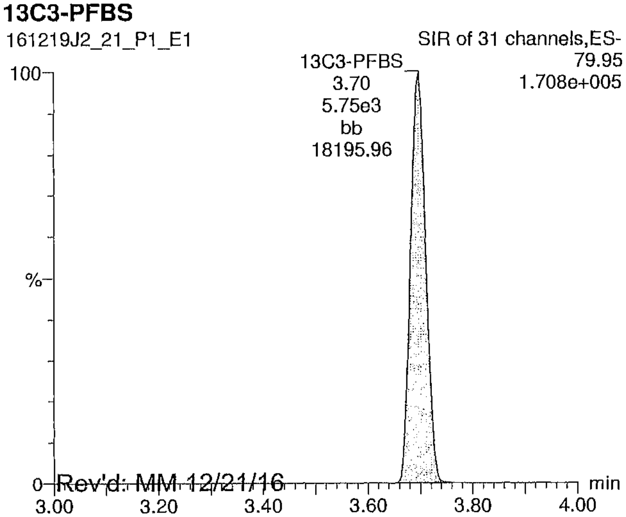
PFHpA



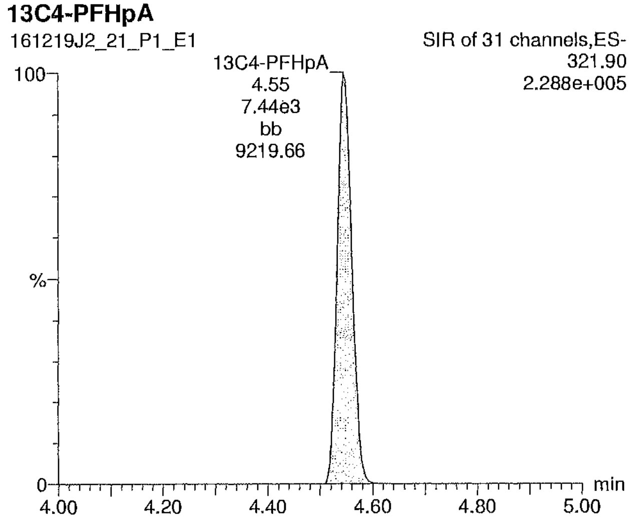
Total PFHxS



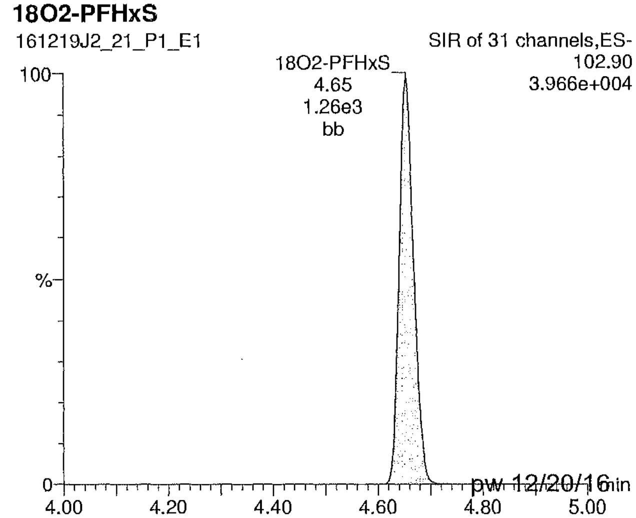
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



~~Rev'd: MM 12/21/16~~ ~~pw 12/20/16~~

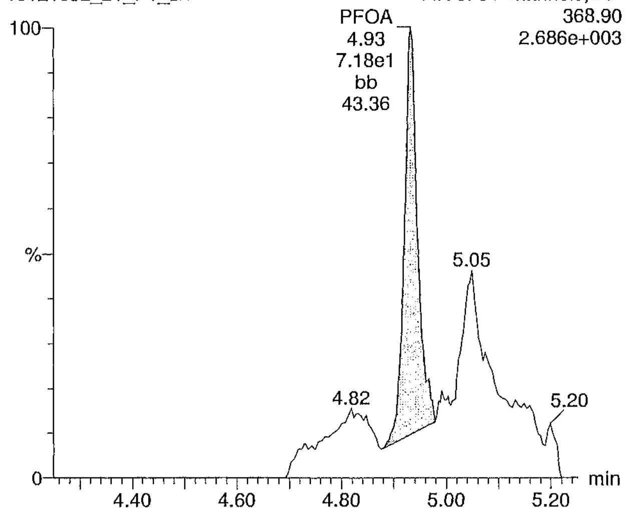
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_21.qld

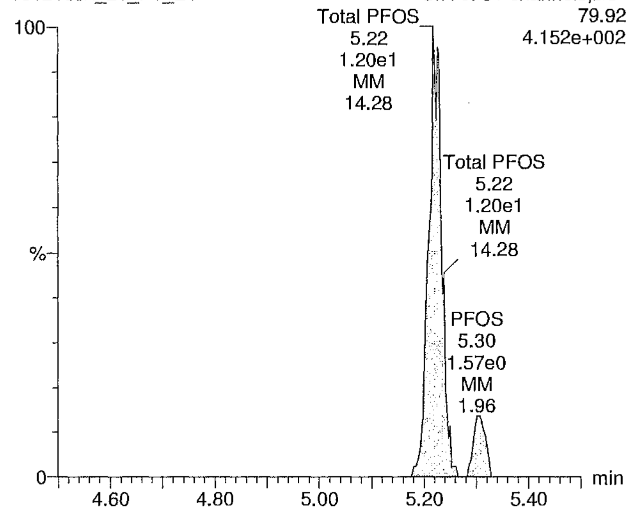
Last Altered: Tuesday, December 20, 2016 16:56:34 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:57:08 Pacific Standard Time

ID: 1601554-04, Description: GW-FPC-3B, Name: 161219J2_21.wiff, Date: 19-Dec-2016, Time: 19:00:17, Instrument: , Lab: ©PE-SCIEX, User: sciex

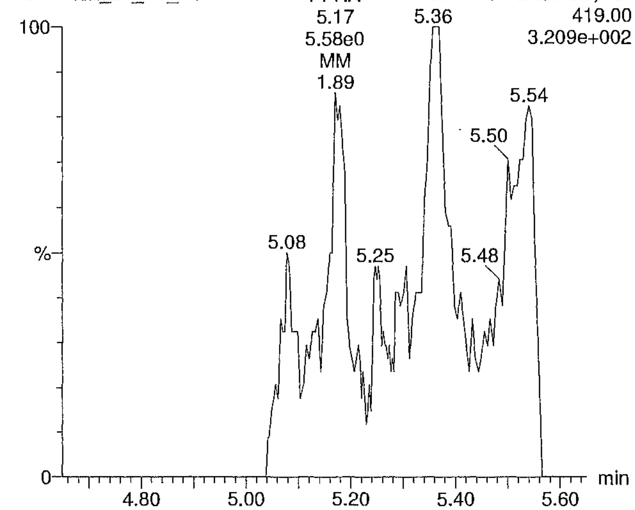
Total PFOA
161219J2_21_P1_E1 SIR of 31 channels,ES- 368.90 2.686e+003



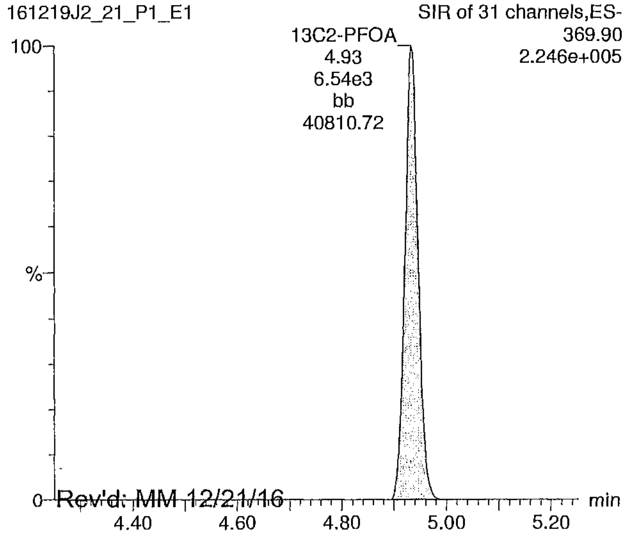
Total PFOS
161219J2_21_P1_E1 SIR of 31 channels,ES- 79.92 4.152e+002



PFNA
161219J2_21_P1_E1 SIR of 31 channels,ES- 419.00 3.209e+002

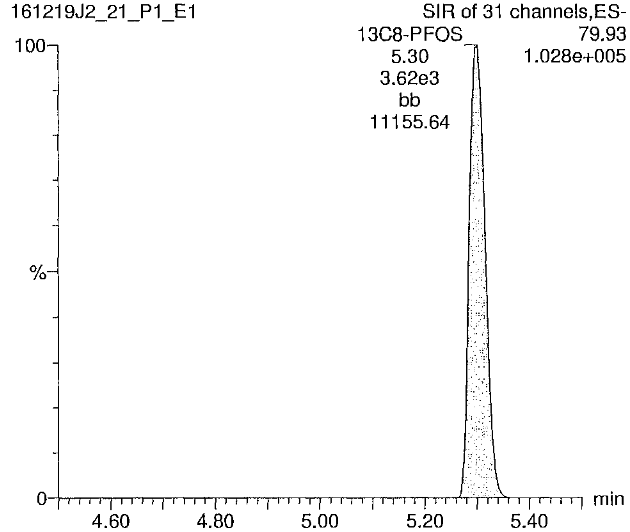


13C2-PFOA
161219J2_21_P1_E1 SIR of 31 channels,ES- 369.90 2.246e+005

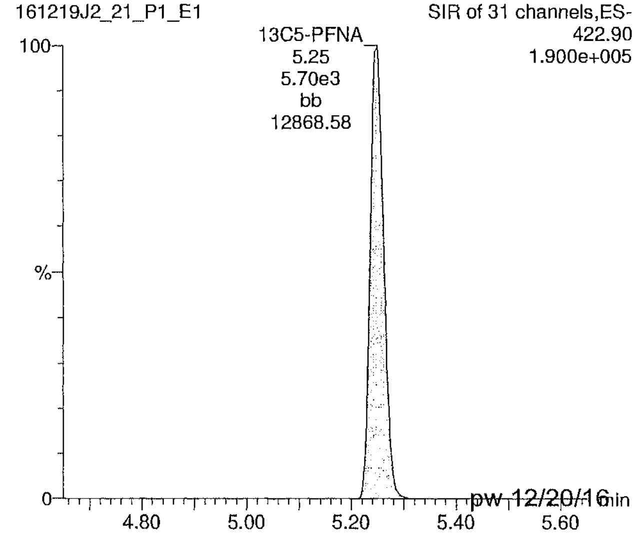


Rev'd: MM 12/21/16

13C8-PFOS
161219J2_21_P1_E1 SIR of 31 channels,ES- 79.93 1.028e+005



13C5-PFNA
161219J2_21_P1_E1 SIR of 31 channels,ES- 422.90 1.900e+005



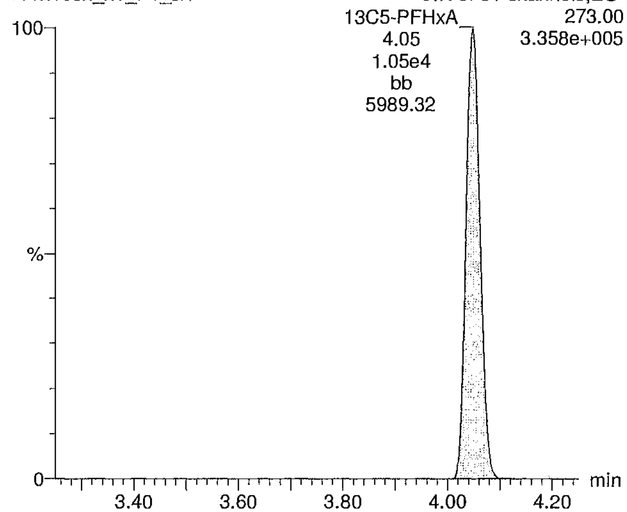
pw 12/20/16

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_21.qld

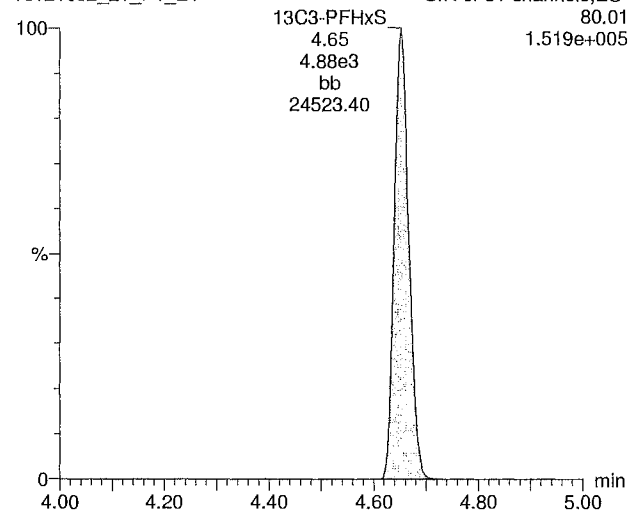
Last Altered: Tuesday, December 20, 2016 16:56:34 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:57:08 Pacific Standard Time

ID: 1601554-04, Description: GW-FPC-3B, Name: 161219J2_21.wiff, Date: 19-Dec-2016, Time: 19:00:17, Instrument: , Lab: ©PE-SCIEX, User: sciex

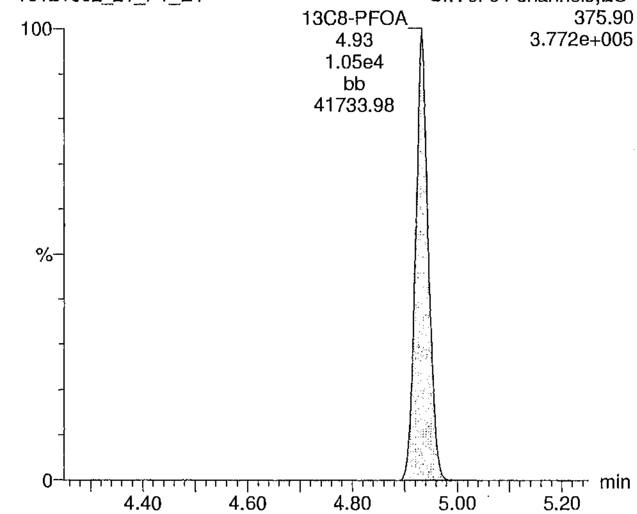
13C5-PFHxA



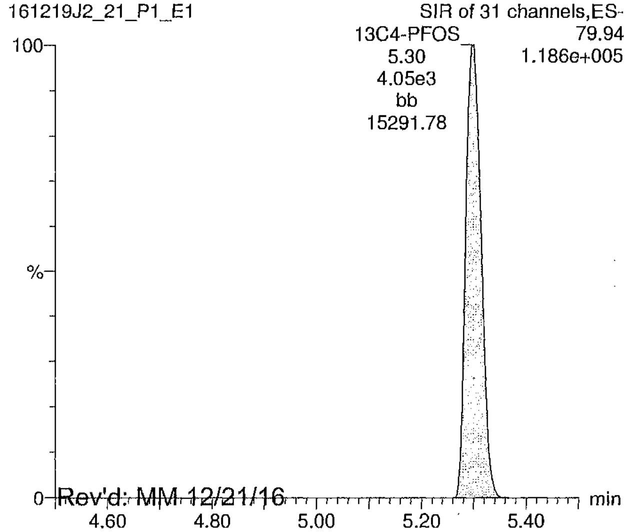
13C3-PFHxS



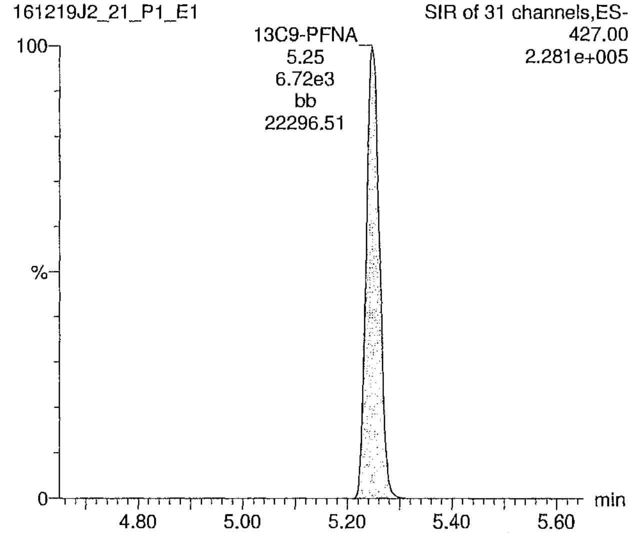
13C8-PFOA



13C4-PFOS



13C9-PFNA



Rev'd: MM 12/21/16

pw 12/20/16

Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_22.qld

Last Altered: Tuesday, December 20, 2016 16:59:32 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:59:57 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: 1601554-05, Description: GW-FPC-3B-Dup, Name: 161219J2_22.wiff, Date: 19-Dec-2016, Time: 19:12:31

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	79.90		5.840e3		0.125			
2	5 PFHpA	318.90	6.348e0	7.519e3		0.125	4.57		
3	6 PFHxS	79.91	1.493e1	1.118e3		0.125	4.66		
4	8 PFOA	368.90	6.923e1	5.733e3		0.125	4.95		
5	9 PFNA	419.00		5.990e3		0.125			
6	10 PFOS	79.92		3.501e3		0.125			
7	15 13C3-PFBS	79.95	5.840e3	1.033e4	0.518	0.125	3.70	109	109
8	16 13C2-PFHxA	269.90	3.633e3	1.033e4	0.920	0.125	4.06	38.2	95.6
9	17 13C4-PFHpA	321.90	7.519e3	1.033e4	0.839	0.125	4.56	86.8	86.8
10	18 18O2-PFHxS	102.90	1.118e3	4.685e3	0.279	0.125	4.66	85.6	85.7
11	19 13C2-6:2 FTS	408.90	1.718e3	1.097e4	0.177	0.125	4.91	88.5	88.5
12	20 13C2-PFOA	369.90	5.733e3	1.097e4	0.665	0.125	4.95	78.5	78.5
13	21 13C5-PFNA	422.90	5.990e3	6.432e3	0.958	0.125	5.26	97.2	97.3
14	22 13C8-PFOS	79.93	3.501e3	3.738e3	0.950	0.125	5.31	98.6	98.6
15	25 13C4-PFBA	171.90	1.047e4	1.047e4	1.000	0.125	2.37	100	100
16	26 13C5-PFHxA	273.00	1.033e4	1.033e4	1.000	0.125	4.05	100	100
17	27 13C3-PFHxS	80.01	4.685e3	4.685e3	1.000	0.125	4.66	100	100
18	28 13C8-PFOA	375.90	1.097e4	1.097e4	1.000	0.125	4.95	100	100
19	29 13C9-PFNA	427.00	6.432e3	6.432e3	1.000	0.125	5.26	100	100
20	30 13C4-PFOS	79.94	3.738e3	3.738e3	1.000	0.125	5.31	100	100
21	31 13C6-PFDA	474.00	7.131e3	7.131e3	1.000	0.125	5.47	100	100
22	32 Total PFBS	79.90		5.840e3		0.125			
23	33 Total PFHxS	79.91		1.118e3		0.125			
24	34 Total PFOA	368.90		5.733e3		0.125			
25	35 Total PFOS	79.92		3.501e3		0.125		0.591	

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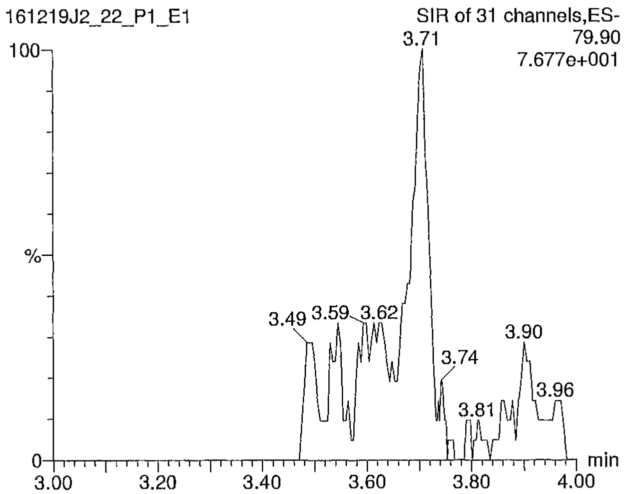
Dataset: U:\Q2.PRO\Results\161219J2\161219J2_22.qld

Last Altered: Tuesday, December 20, 2016 16:59:32 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:59:57 Pacific Standard Time

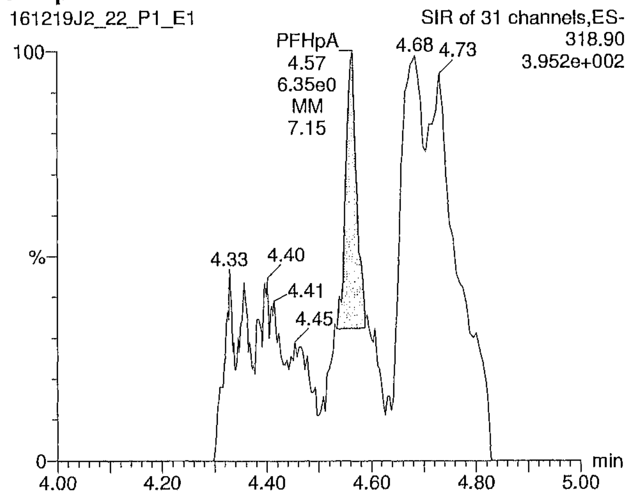
Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: 1601554-05, Description: GW-FPC-3B-Dup, Name: 161219J2_22.wiff, Date: 19-Dec-2016, Time: 19:12:31, Instrument: , Lab: ©PE-SCIEX, User: sciex

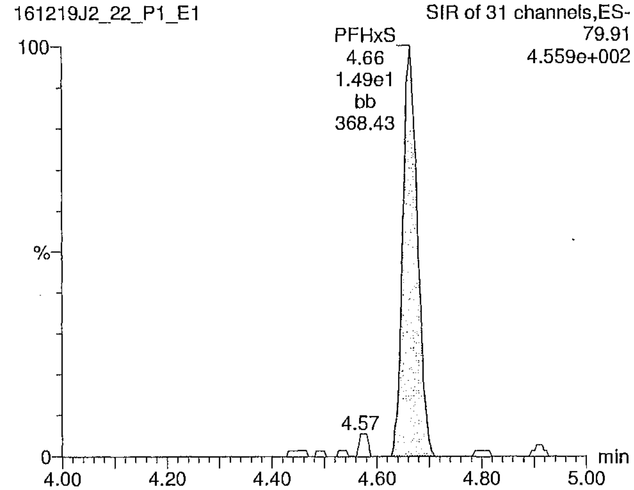
Total PFBS



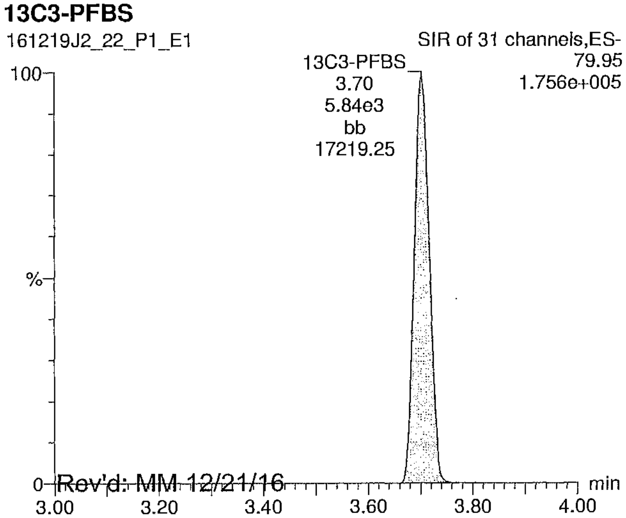
PFHpA



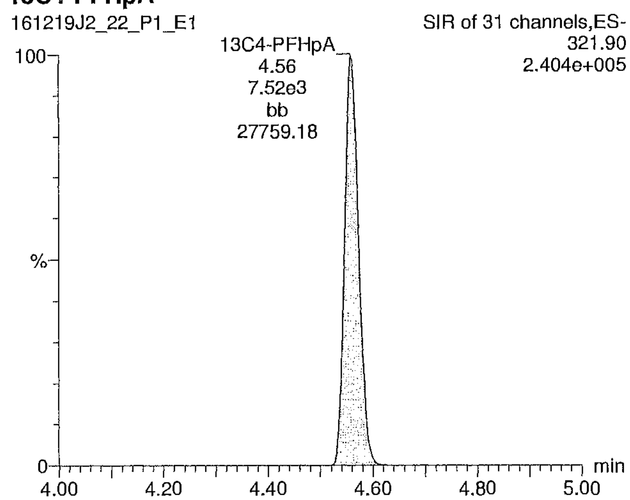
Total PFHxS



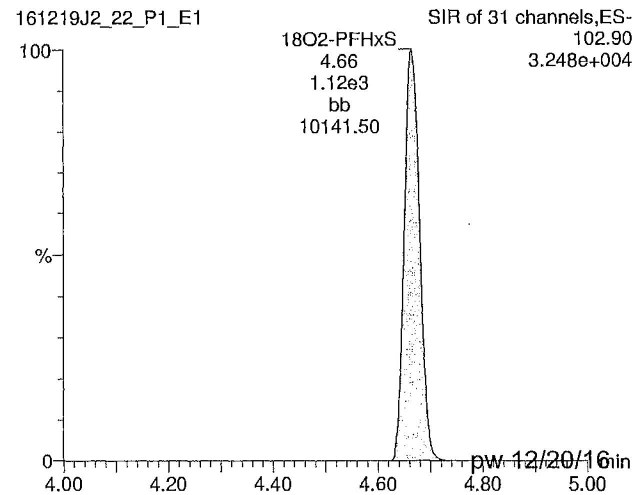
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



Rev'd: MM 12/21/16

pw 12/20/16

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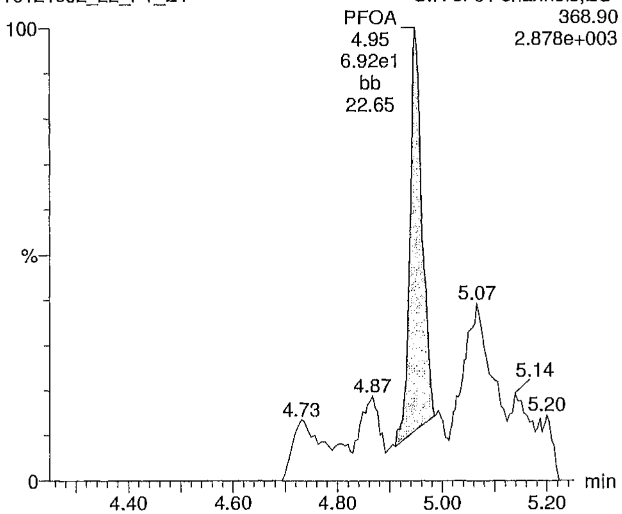
Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_22.qld

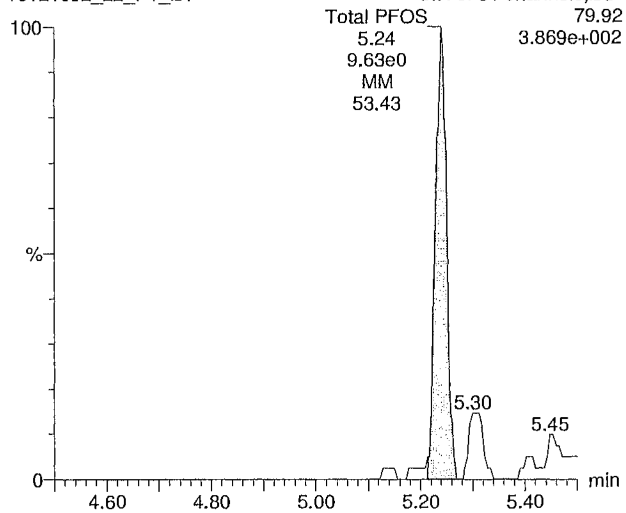
Last Altered: Tuesday, December 20, 2016 16:59:32 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:59:57 Pacific Standard Time

ID: 1601554-05, Description: GW-FPC-3B-Dup, Name: 161219J2_22.wiff, Date: 19-Dec-2016, Time: 19:12:31, Instrument: , Lab: ©PE-SCIEX, User: sciex

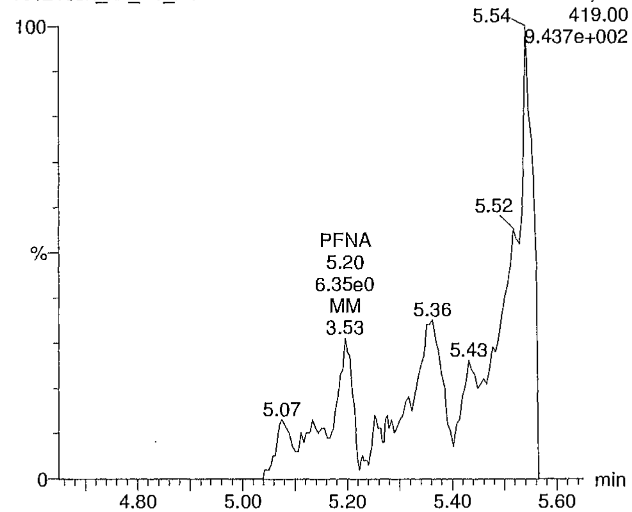
Total PFOA
161219J2_22_P1_E1



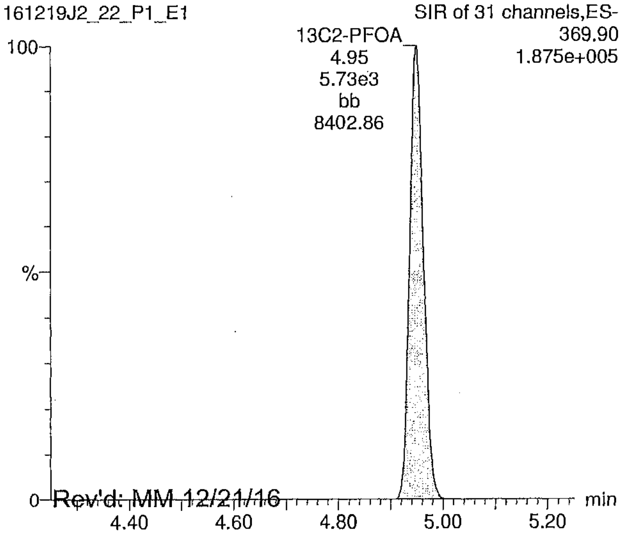
Total PFOS
161219J2_22_P1_E1



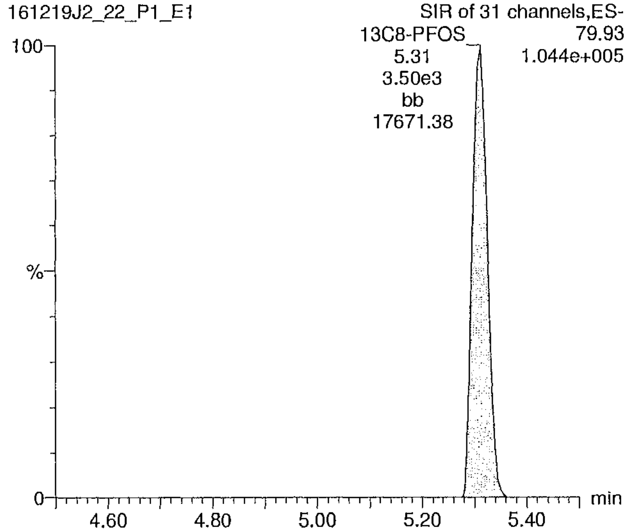
PFNA
161219J2_22_P1_E1



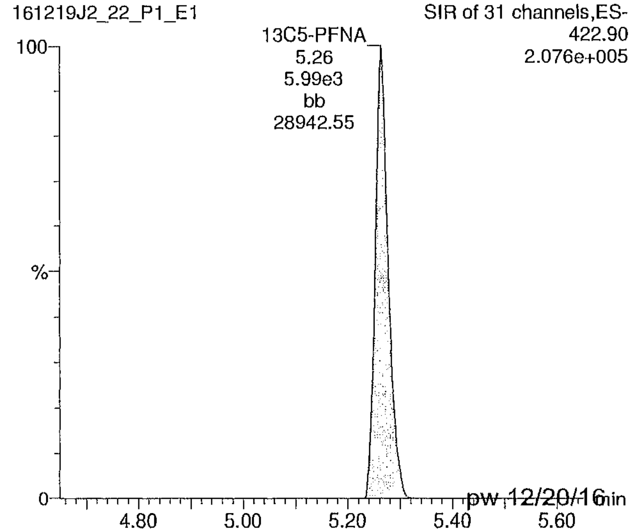
13C2-PFOA
161219J2_22_P1_E1



13C8-PFOS
161219J2_22_P1_E1



13C5-PFNA
161219J2_22_P1_E1



Rev'd: MM 12/21/16

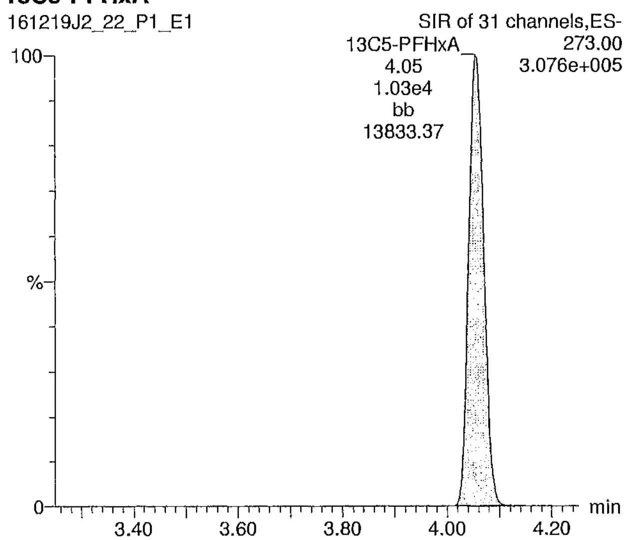
pw 12/20/16

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_22.qld

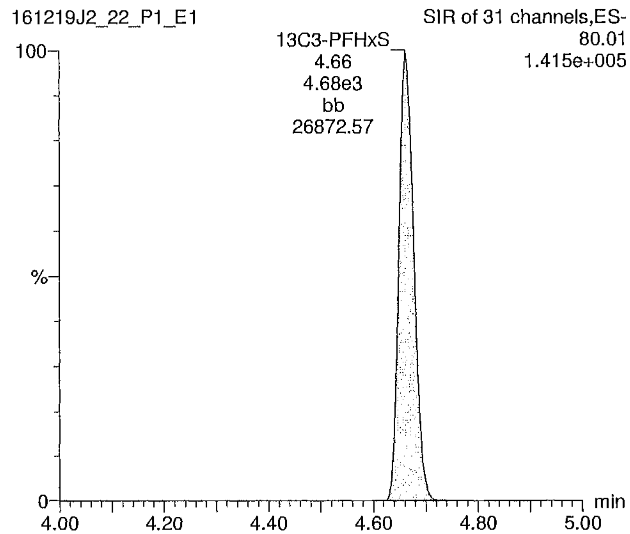
Last Altered: Tuesday, December 20, 2016 16:59:32 Pacific Standard Time
Printed: Tuesday, December 20, 2016 16:59:57 Pacific Standard Time

ID: 1601554-05, Description: GW-FPC-3B-Dup, Name: 161219J2_22.wiff, Date: 19-Dec-2016, Time: 19:12:31, Instrument: , Lab: ©PE-SCIEX, User: sciex

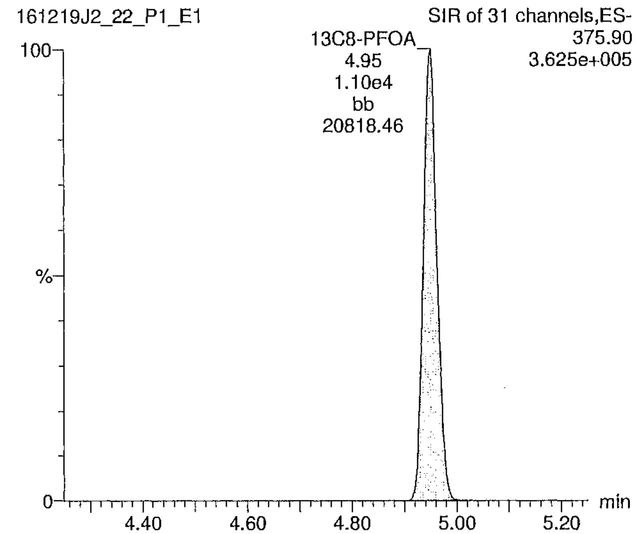
13C5-PFHxA



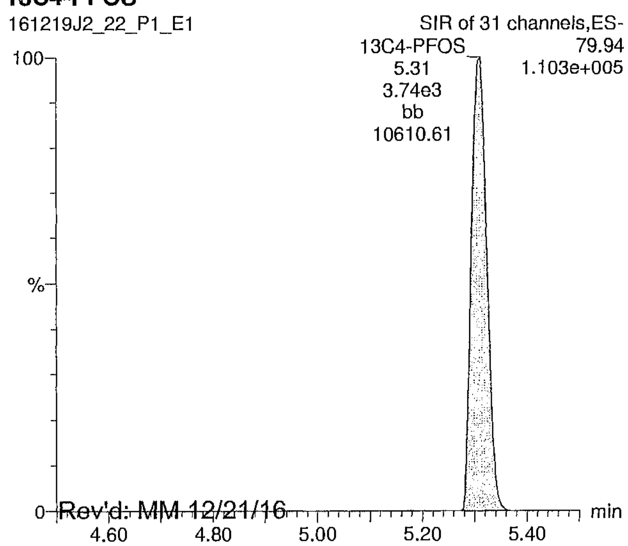
13C3-PFHxS



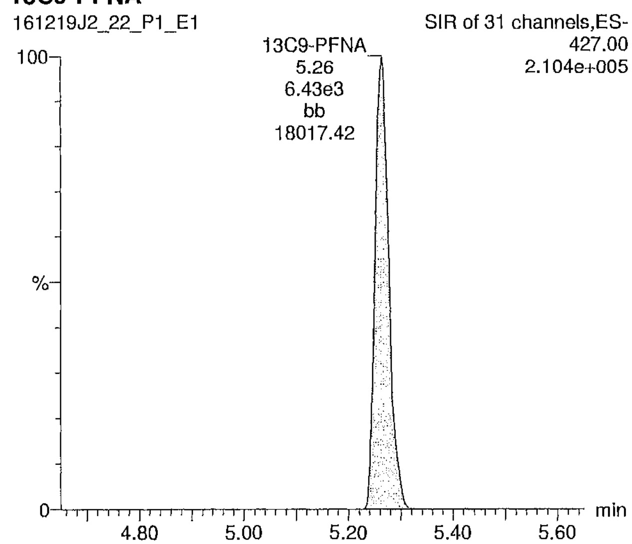
13C8-PFOA



13C4-PFOS



13C9-PFNA



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pw 12/20/16

Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_23.qld

Last Altered: Tuesday, December 20, 2016 17:02:51 Pacific Standard Time
Printed: Tuesday, December 20, 2016 17:03:12 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: 1601554-06, Description: GW-FPC-3C, Name: 161219J2_23.wiff, Date: 19-Dec-2016, Time: 19:24:45

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	79.90	3.387e1	5.853e3		0.126	3.71	0.360	
2	5 PFHpA	318.90	4.090e1	7.424e3		0.126	4.55		
3	6 PFHxS	79.91	6.259e1	1.211e3		0.126	4.66	1.40	
4	8 PFOA	368.90	2.139e2	5.901e3		0.126	4.95	1.83	
5	9 PFNA	419.00		5.869e3		0.126			
6	10 PFOS	79.92		3.688e3		0.126			
7	15 13C3-PFBS	79.95	5.853e3	1.072e4	0.518	0.126	3.71	105	105
8	16 13C2-PFHxA	269.90	3.572e3	1.072e4	0.920	0.126	4.06	36.0	90.5
9	17 13C4-PFHpA	321.90	7.424e3	1.072e4	0.839	0.126	4.55	82.1	82.5
10	18 18O2-PFHxS	102.90	1.211e3	4.908e3	0.279	0.126	4.66	88.2	88.6
11	19 13C2-6:2 FTS	408.90	1.748e3	1.149e4	0.177	0.126	4.91	85.6	86.0
12	20 13C2-PFOA	369.90	5.901e3	1.149e4	0.665	0.126	4.95	76.8	77.2
13	21 13C5-PFNA	422.90	5.869e3	6.998e3	0.958	0.126	5.26	87.1	87.6
14	22 13C8-PFOS	79.93	3.688e3	4.128e3	0.950	0.126	5.31	93.6	94.1
15	25 13C4-PFBA	171.90	1.121e4	1.121e4	1.000	0.126	2.37	99.5	100
16	26 13C5-PFHxA	273.00	1.072e4	1.072e4	1.000	0.126	4.06	99.5	100
17	27 13C3-PFHxS	80.01	4.908e3	4.908e3	1.000	0.126	4.66	99.5	100
18	28 13C8-PFOA	375.90	1.149e4	1.149e4	1.000	0.126	4.95	99.5	100
19	29 13C9-PFNA	427.00	6.998e3	6.998e3	1.000	0.126	5.26	99.5	100
20	30 13C4-PFOS	79.94	4.128e3	4.128e3	1.000	0.126	5.31	99.5	100
21	31 13C6-PFDA	474.00	6.913e3	6.913e3	1.000	0.126	5.51	99.5	100
22	32 Total PFBS	79.90		5.853e3		0.126		0.360	
23	33 Total PFHxS	79.91		1.211e3		0.126		1.40	
24	34 Total PFOA	368.90		5.901e3		0.126		1.83	
25	35 Total PFOS	79.92		3.688e3		0.126		0.976	

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Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

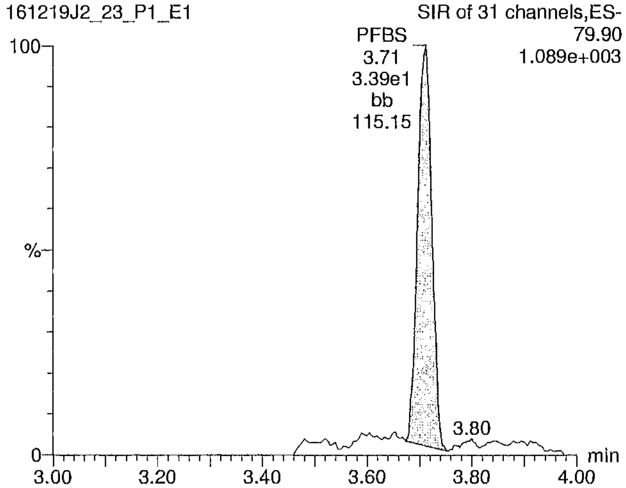
Dataset: U:\Q2.PRO\Results\161219J2\161219J2_23.qld

Last Altered: Tuesday, December 20, 2016 17:02:51 Pacific Standard Time
Printed: Tuesday, December 20, 2016 17:03:12 Pacific Standard Time

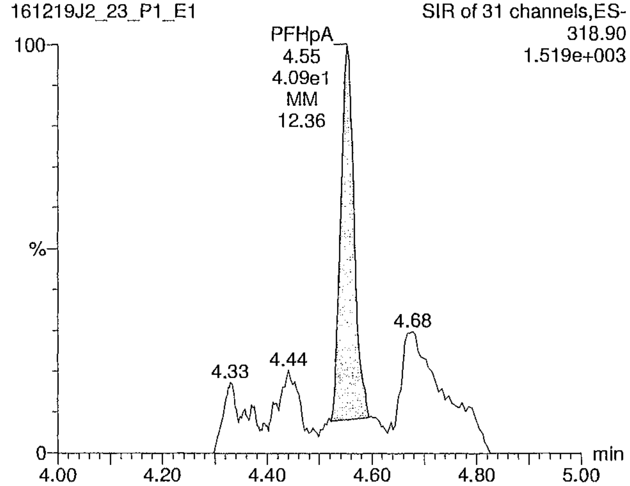
Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

ID: 1601554-06, Description: GW-FPC-3C, Name: 161219J2_23.wiff, Date: 19-Dec-2016, Time: 19:24:45, Instrument: , Lab: ©PE-SCIEX, User: sciex

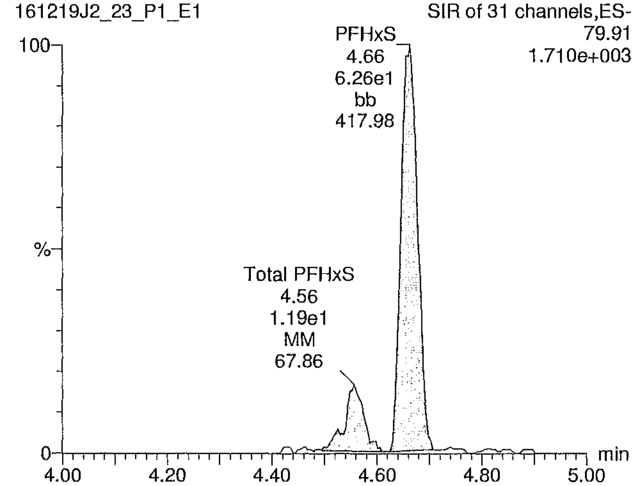
Total PFBS
161219J2_23_P1_E1 SIR of 31 channels,ES- 79.90 1.089e+003



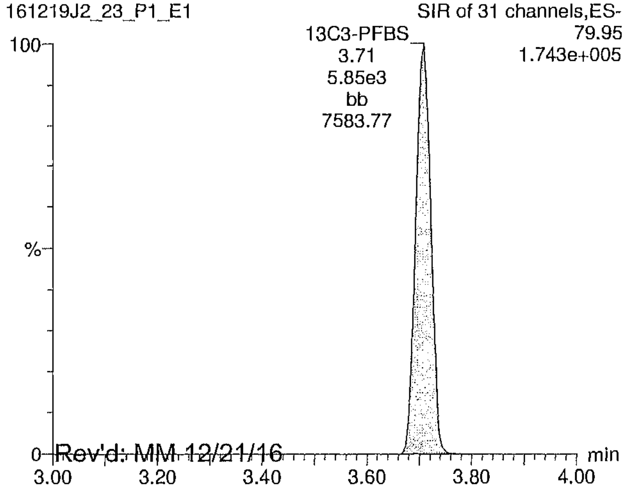
PFHpA
161219J2_23_P1_E1 SIR of 31 channels,ES- 318.90 1.519e+003



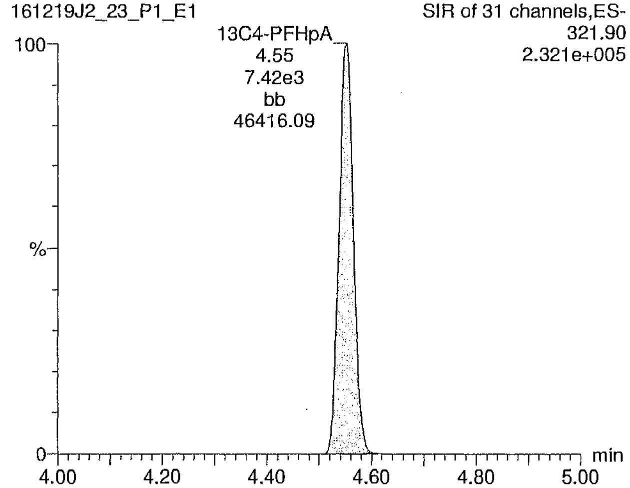
Total PFHxS
161219J2_23_P1_E1 SIR of 31 channels,ES- 79.91 1.710e+003



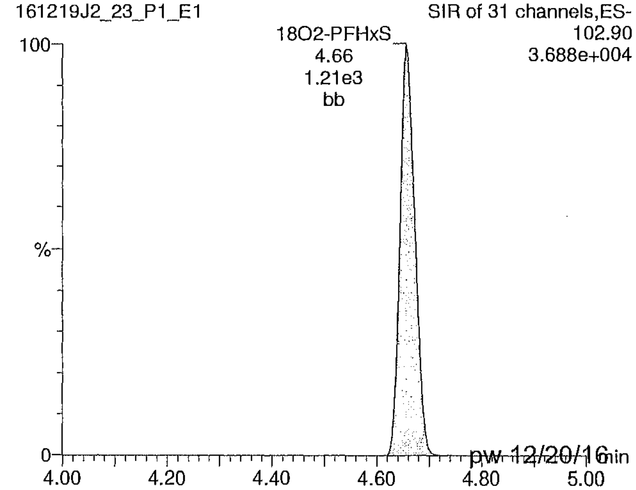
13C3-PFBS
161219J2_23_P1_E1 SIR of 31 channels,ES- 79.95 1.743e+005



13C4-PFHpA
161219J2_23_P1_E1 SIR of 31 channels,ES- 321.90 2.321e+005



18O2-PFHxS
161219J2_23_P1_E1 SIR of 31 channels,ES- 102.90 3.688e+004



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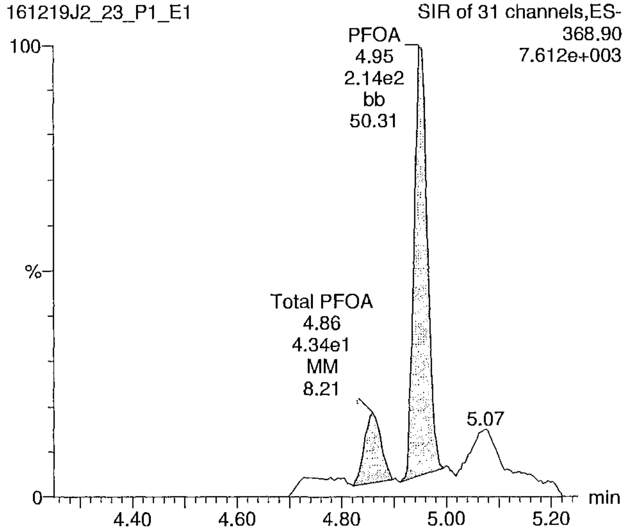
Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_23.qld

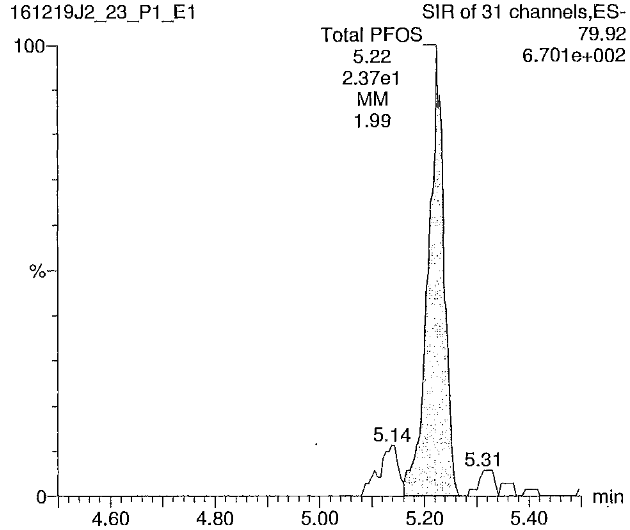
Last Altered: Tuesday, December 20, 2016 17:02:51 Pacific Standard Time
Printed: Tuesday, December 20, 2016 17:03:12 Pacific Standard Time

ID: 1601554-06, Description: GW-FPC-3C, Name: 161219J2_23.wiff, Date: 19-Dec-2016, Time: 19:24:45, Instrument: , Lab: ©PE-SCIEX, User: sciex

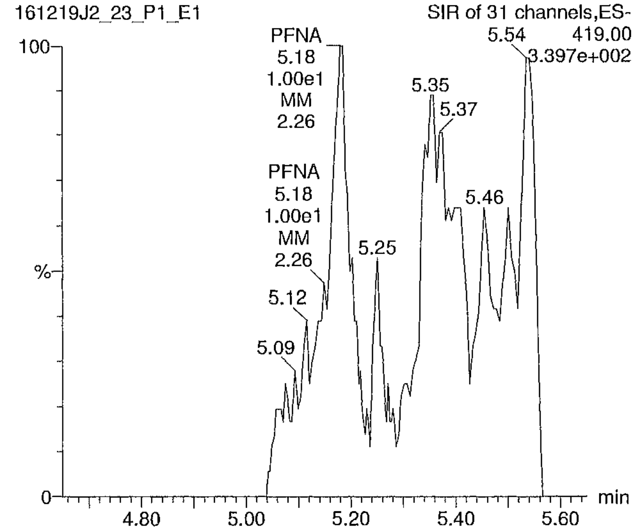
Total PFOA
161219J2_23_P1_E1



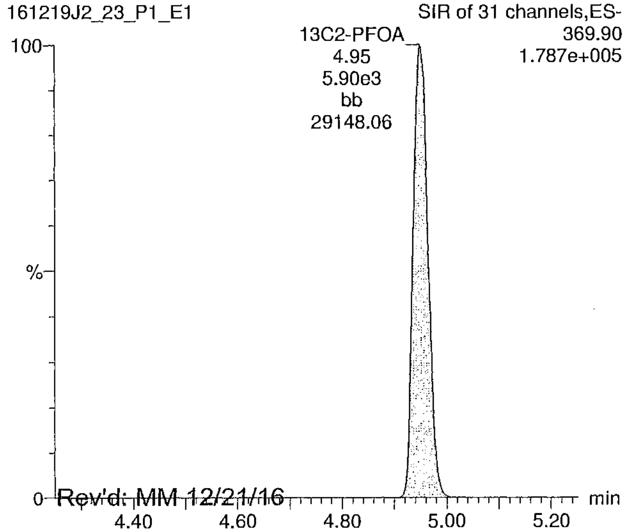
Total PFOS
161219J2_23_P1_E1



PFNA
161219J2_23_P1_E1



13C2-PFOA
161219J2_23_P1_E1



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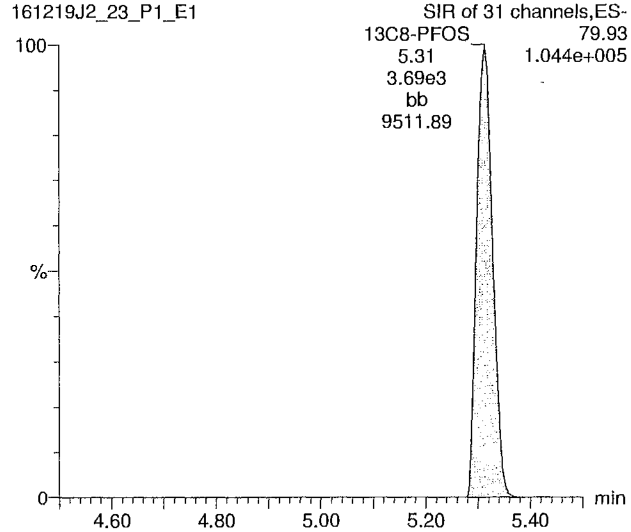
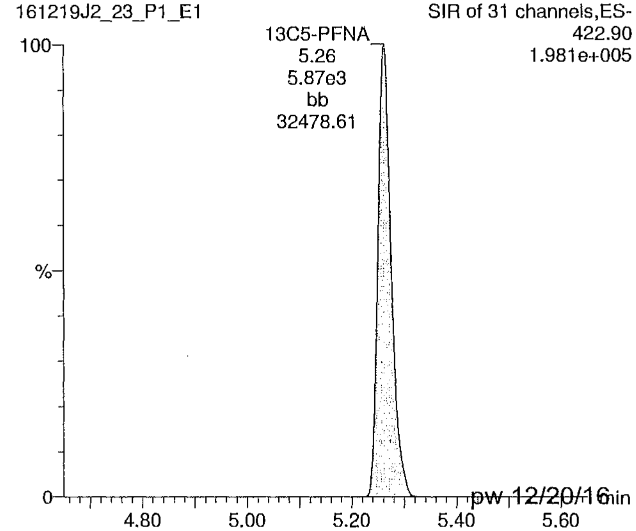
13C8-PFOS
161219J2_23_P1_E1



13C5-PFNA
161219J2_23_P1_E1



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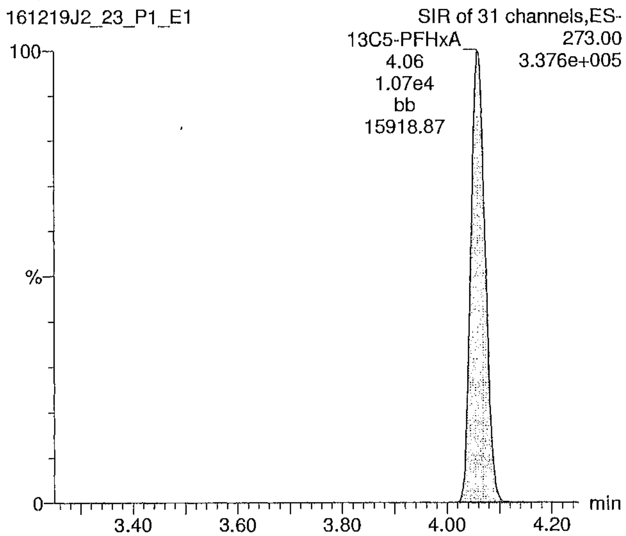
Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_23.qld

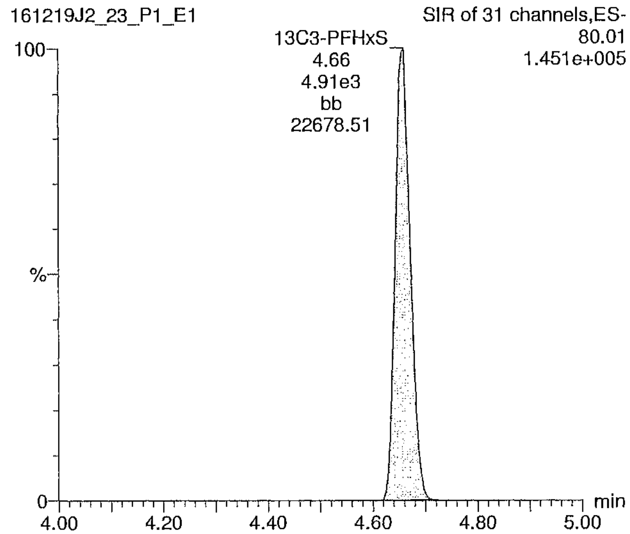
Last Altered: Tuesday, December 20, 2016 17:02:51 Pacific Standard Time
Printed: Tuesday, December 20, 2016 17:03:12 Pacific Standard Time

ID: 1601554-06, Description: GW-FPC-3C, Name: 161219J2_23.wiff, Date: 19-Dec-2016, Time: 19:24:45, Instrument: , Lab: ©PE-SCIEX, User: sciex

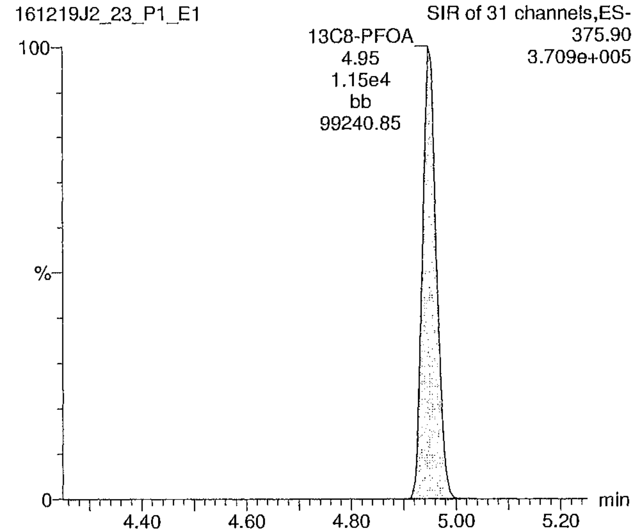
13C5-PFHxA



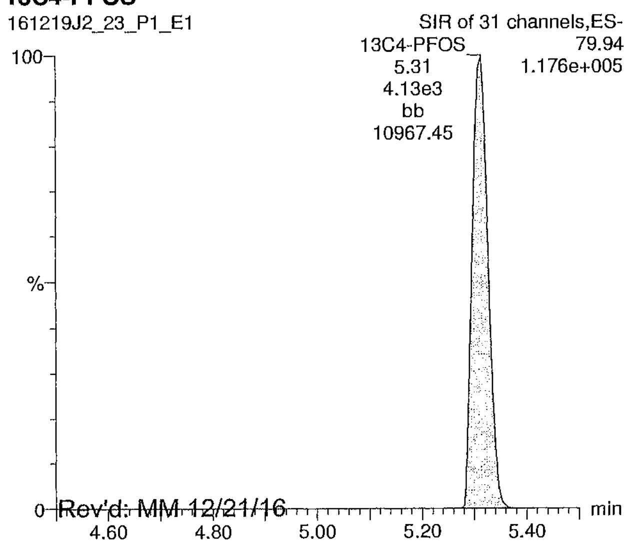
13C3-PFHxS



13C8-PFOA



13C4-PFOS



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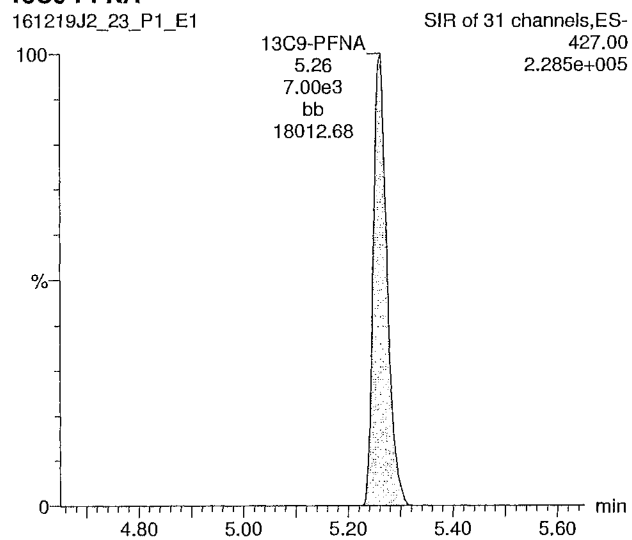
13C9-PFNA



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CONTINUING CALIBRATION

Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_31.qld

Last Altered: Tuesday, December 20, 2016 12:20:31 Pacific Standard Time
Printed: Tuesday, December 20, 2016 12:21:15 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

Name: 161219J2_31.wiff, Date: 19-Dec-2016, Time: 21:02:44, ID: ST161219J2-9 PFC CS3 16L1417 A, Description: PFC CS3 16L1417 A

	# Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec	
1	1 PFBA	168.90	1.80e4	1.91e4		1.000	2.40	11.3	112.7	75-125
2	2 PFPeA	218.90	1.71e4	2.12e4		1.000	3.46	11.3	112.6	
3	3 PFBS	79.90	8.82e3	1.22e4		1.000	3.70	11.3	113.0	
4	4 PFHxA	268.90	1.47e4	8.03e3		1.000	4.06	11.1	111.4	
5	5 PFHpA	318.90	1.26e4	1.67e4		1.000	4.53	11.8	118.4	
6	6 PFHxS	79.91	5.67e3	2.60e3		1.000	4.64	10.6	106.4	
7	7 6:2 FTS	406.90	3.58e3	4.12e3		1.000	4.88	9.94	99.4	
8	8 PFOA	368.90	1.43e4	1.50e4		1.000	4.92	11.0	110.4	
9	9 PFNA	419.00	1.01e4	1.32e4		1.000	5.23	10.8	107.9	
10	10 PFOS	79.92	4.77e3	6.38e3		1.000	5.28	10.1	100.6	
11	11 PFDA	469.00	4.36e3	6.23e3		1.000	5.52	11.8	117.9	
12	12 8:2 FTS	506.90	1.15e3	1.41e3		1.000	5.50	9.88	98.8	
13	13 13C3-PFBA	172.00	1.91e4	2.27e4	0.857	1.000	2.40	12.3	98.1	60-150
14	14 13C3-PFPeA	221.90	2.12e4	2.16e4	0.866	1.000	3.45	14.2	113.3	
15	15 13C3-PFBS	79.95	1.22e4	2.16e4	0.518	1.000	3.70	13.7	109.5	
16	16 13C2-PFHxA	269.90	8.03e3	2.16e4	0.920	1.000	4.06	5.06	101.1	
17	17 13C4-PFHpA	321.90	1.67e4	2.16e4	0.839	1.000	4.53	11.5	92.4	
18	18 18O2-PFHxS	102.90	2.60e3	9.62e3	0.279	1.000	4.64	12.1	97.0	
19	19 13C2-6:2 FTS	408.90	4.12e3	1.96e4	0.177	1.000	4.88	14.8	118.6	40-150
20	20 13C2-PFOA	369.90	1.50e4	1.96e4	0.665	1.000	4.92	14.4	115.1	60-150
21	21 13C5-PFNA	422.90	1.32e4	1.41e4	0.958	1.000	5.23	12.2	97.8	50-150
22	22 13C8-PFOS	79.93	6.38e3	6.21e3	0.950	1.000	5.29	13.5	108.1	60-150
23	23 13C2-PFDA	470.00	6.23e3	7.69e3	0.822	1.000	5.52	12.3	98.6	
24	24 13C2-8:2 FTS	508.70	1.41e3	7.69e3	0.197	1.000	5.50	11.6	93.2	40-150
25	25 13C4-PFBA	171.90	2.27e4	2.27e4	1.000	1.000	2.40	12.5	100.0	
26	26 13C5-PFHxA	273.00	2.16e4	2.16e4	1.000	1.000	4.06	12.5	100.0	
27	27 13C3-PFHxS	80.01	9.62e3	9.62e3	1.000	1.000	4.64	12.5	100.0	
28	28 13C8-PFOA	375.90	1.96e4	1.96e4	1.000	1.000	4.92	12.5	100.0	
29	29 13C9-PFNA	427.00	1.41e4	1.41e4	1.000	1.000	5.23	12.5	100.0	
30	30 13C4-PFOS	79.94	6.21e3	6.21e3	1.000	1.000	5.28	12.5	100.0	
31	31 13C6-PFDA	474.00	7.69e3	7.69e3	1.000	1.000	5.52	12.5	100.0	

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	Sample Name	Acquisition Date	Sample ID	Sample Comment
1	161219J2_01	12/19/2016 14:55:35	IPA	IPA
2	161219J2_02	12/19/2016 15:07:52	ST161219J2-1 PFC CS(-2) 16L1412 A	PFC CS(-2) 16L1412 A
3	161219J2_03	12/19/2016 15:20:04	ST161219J2-2 PFC CS(-1) 16L1413 A	PFC CS(-1) 16L1413 A
4	161219J2_04	12/19/2016 15:32:16	ST161219J2-3 PFC CS0 16L1414 A	PFC CS0 16L1414 A
5	161219J2_05	12/19/2016 15:44:32	ST161219J2-4 PFC CS1 16L1415 A	PFC CS1 16L1415 A
6	161219J2_06	12/19/2016 15:56:48	ST161219J2-5 PFC CS2 16L1416 A	PFC CS2 16L1416 A
7	161219J2_07	12/19/2016 16:09:01	ST161219J2-6 PFC CS3 16L1417 A	PFC CS3 16L1417 A
8	161219J2_08	12/19/2016 16:21:15	ST161219J2-7 PFC CS4 16L1418 A	PFC CS4 16L1418 A
9	161219J2_09	12/19/2016 16:33:30	ST161219J2-8 PFC CS5 16L1419 A	PFC CS5 16L1419 A
10	161219J2_10	12/19/2016 16:45:44	IPA	IPA
11	161219J2_11	12/19/2016 16:57:58	SS161219J2-1 PFC SSS 16K2201 A	PFC SSS 16K2201 A
12	161219J2_12	12/19/2016 17:10:10	IPA	IPA
13	161219J2_13	12/19/2016 17:22:27	B6L0076-BS1	OPR
14	161219J2_14	12/19/2016 17:34:40	B6L0088-BS1	OPR
15	161219J2_15	12/19/2016 17:46:54	IPA	IPA
16	161219J2_16	12/19/2016 17:59:08	B6L0076-BLK1	Method Blank
17	161219J2_17	12/19/2016 18:11:24	B6L0088-BLK1	Method Blank
18	161219J2_18	12/19/2016 18:23:38	1601554-01	GW-EB-Water Level
19	161219J2_19	12/19/2016 18:35:49	1601554-02	FB-DI Water
20	161219J2_20	12/19/2016 18:48:04	1601554-03	GW-FPC-3A
21	161219J2_21	12/19/2016 19:00:17	1601554-04	GW-FPC-3B
22	161219J2_22	12/19/2016 19:12:31	1601554-05	GW-FPC-3B-Dup
23	161219J2_23	12/19/2016 19:24:45	1601554-06	GW-FPC-3C
24	161219J2_24	12/19/2016 19:37:00	B6L0076-MS1	Matrix Spike
25	161219J2_25	12/19/2016 19:49:14	B6L0076-MSD1	Matrix Spike Dup
26	161219J2_26	12/19/2016 20:01:29	1601557-01	MATPEW008
27	161219J2_27	12/19/2016 20:13:44	1601557-02	MATPEW004
28	161219J2_28	12/19/2016 20:26:00	1601557-03	MATPEW044
29	161219J2_29	12/19/2016 20:38:16	1601557-04	MATPEW012
30	161219J2_30	12/19/2016 20:50:30	IPA	IPA
31	161219J2_31	12/19/2016 21:02:44	ST161219J2-9 PFC CS3 16L1417 A	PFC CS3 16L1417 A
32	161219J2_32	12/19/2016 21:14:56	IPA	IPA
33	161219J2_33	12/19/2016 21:27:12	1601557-05	MATPEW013
34	161219J2_34	12/19/2016 21:39:25	1601557-06	MATPEW015
35	161219J2_35	12/19/2016 21:51:40	1601557-07	MATPEW001
36	161219J2_36	12/19/2016 22:03:53	B6L0088-MS1	Matrix Spike
37	161219J2_37	12/19/2016 22:16:08	B6L0088-MSD1	Matrix Spike Dup
38	161219J2_38	12/19/2016 22:28:22	IPA	IPA
39	161219J2_39	12/19/2016 22:40:37	B6L0098-BS1	OPR
40	161219J2_40	12/19/2016 22:52:52	IPA	IPA
41	161219J2_41	12/19/2016 23:05:07	B6L0098-BLK1	Method Blank
42	161219J2_42	12/19/2016 23:17:24	IPA	IPA
43	161219J2_43	12/19/2016 23:29:39	1601563-01	MATPEW005
44	161219J2_44	12/19/2016 23:41:54	1601563-02	MATPEW006
45	161219J2_45	12/19/2016 23:54:11	1601563-03	MATPEW003
46	161219J2_46	12/20/2016 00:06:26	1601563-04	MATPEW011
47	161219J2_47	12/20/2016 00:18:39	1601563-05	MATPEW021
48	161219J2_48	12/20/2016 00:30:56	1601563-06	MATPEW022
49	161219J2_49	12/20/2016 00:43:13	IPA	IPA
50	161219J2_50	12/20/2016 00:55:28	ST161219J2-10 PFC CS3 16L1417 A	PFC CS3 16L1417 A
51	161219J2_51	12/20/2016 01:07:40	IPA	IPA
52	161219J2_52	12/20/2016 01:19:55	1601563-07	GW-EB-Water Level
53	161219J2_53	12/20/2016 01:32:10	1601563-08	FB-DI Water
54	161219J2_54	12/20/2016 01:44:26	1601563-09	GW-FPC-3A
55	161219J2_55	12/20/2016 01:56:41	1601563-10	GW-FPC-3B
56	161219J2_56	12/20/2016 02:09:00	1601563-11	GW-FPC-3B-Dup

	Sample Name	Acquisition Date	Sample ID	Sample Comment
57	161219J2_57	12/20/2016 02:21:13	1601563-12	GW-FPC-3C
58	161219J2_58	12/20/2016 02:33:26	1601563-13	MATPEW008
59	161219J2_59	12/20/2016 02:45:40	1601563-14	MATPEW004
60	161219J2_60	12/20/2016 02:57:54	1601563-15	MATPEW044
61	161219J2_61	12/20/2016 03:10:08	1601563-16	MATPEW012
62	161219J2_62	12/20/2016 03:22:23	IPA	IPA
63	161219J2_63	12/20/2016 03:34:38	ST161219J2-11 PFC CS3 16L1417 A	PFC CS3 16L1417 A
64	161219J2_64	12/20/2016 03:46:53	IPA	IPA
65	161219J2_65	12/20/2016 03:59:07	1601563-17	MATPEW018
66	161219J2_66	12/20/2016 04:11:23	B6L0098-MS1	Matrix Spike
67	161219J2_67	12/20/2016 04:23:38	B6L0098-MSD1	Matrix Spike Dup
68	161219J2_68	12/20/2016 04:35:53	IPA	IPA
69	161219J2_69	12/20/2016 04:48:04	ST161219J2-12 PFC CS3 16L1417 A	PFC CS3 16L1417 A
70	161219J2_70	12/20/2016 05:00:21	IPA	IPA

LC Calibration Standards Review Checklist Q2

			ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manaul Integrations	NA
Calibration ID:	ST161219J2-9	L M H	NA	☑	☑	☑	☑	☑	☐
Calibration ID:	-10	L M H	☐	A ☑	☑	☑	☑	☑	☐
Calibration ID:	-11	L M H	☐	☑	☑	☑	☑	☑	☐
Calibration ID:	-12	L M H	☑	☑	☑	☑	☑	☑	☑
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 10/14/16

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Reviewed By: MMSC 12/20/16
Initials/Date

Comments:
PFC List 1BA
A PFHpA outside criteria, data not reported for. PW 12/20/16

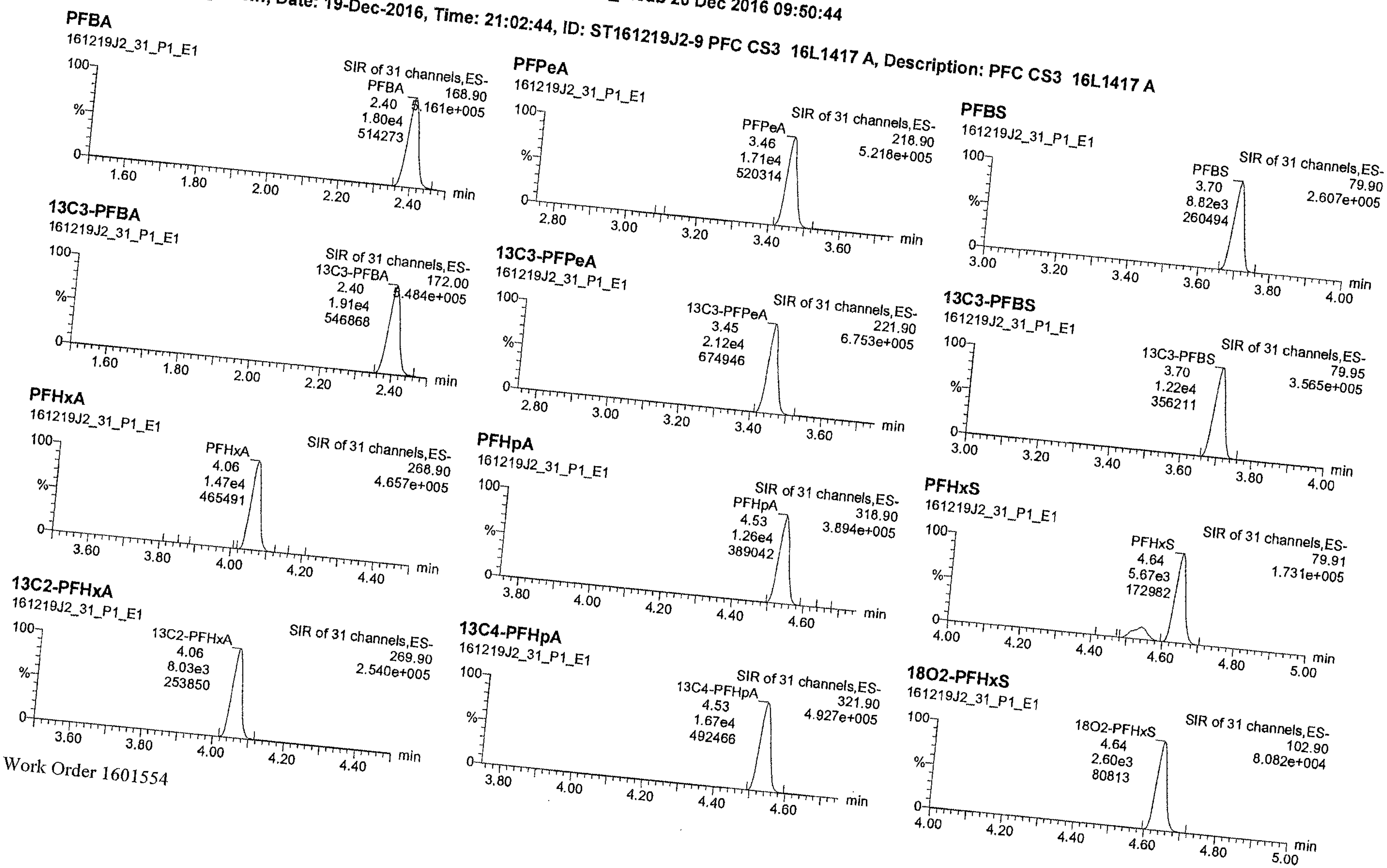
Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_31.qld

Last Altered: Tuesday, December 20, 2016 12:20:31 Pacific Standard Time
Printed: Tuesday, December 20, 2016 12:23:03 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 12:20:24
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

Name: 161219J2_31.wiff, Date: 19-Dec-2016, Time: 21:02:44, ID: ST161219J2-9 PFC CS3 16L1417 A, Description: PFC CS3 16L1417 A

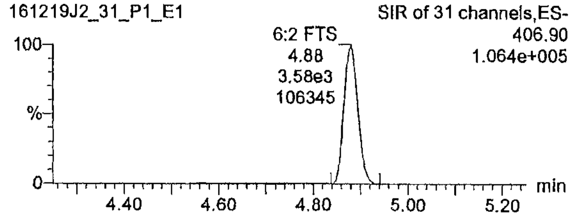


Dataset: U:\Q2.PRO\Results\161219J2\161219J2_31.qld

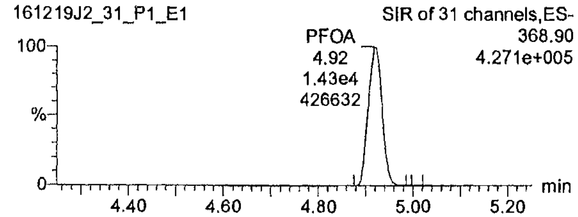
Last Altered: Tuesday, December 20, 2016 12:20:31 Pacific Standard Time
Printed: Tuesday, December 20, 2016 12:23:03 Pacific Standard Time

Name: 161219J2_31.wiff, Date: 19-Dec-2016, Time: 21:02:44, ID: ST161219J2-9 PFC CS3 16L1417 A, Description: PFC CS3 16L1417 A

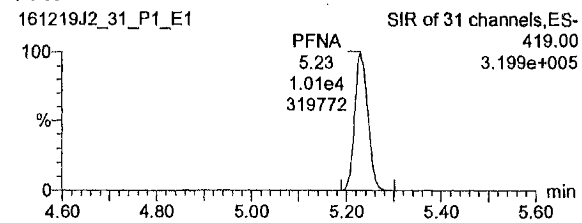
6:2 FTS



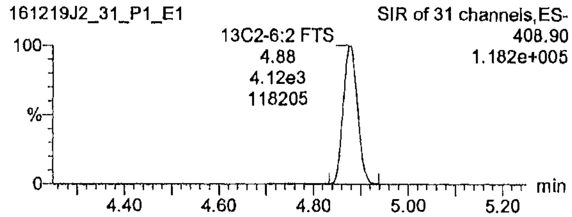
PFOA



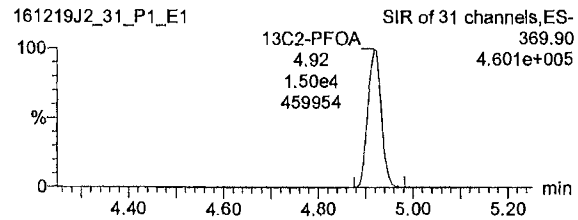
PFNA



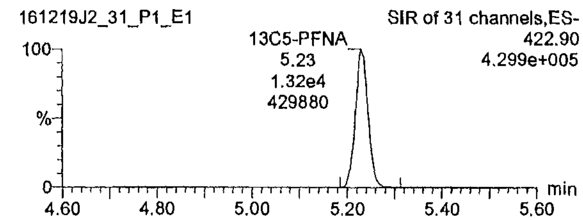
13C2-6:2 FTS



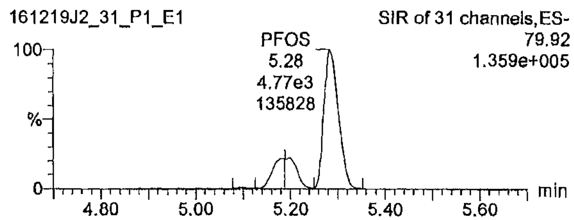
13C2-PFOA



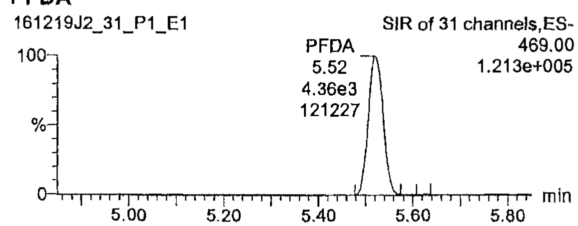
13C5-PFNA



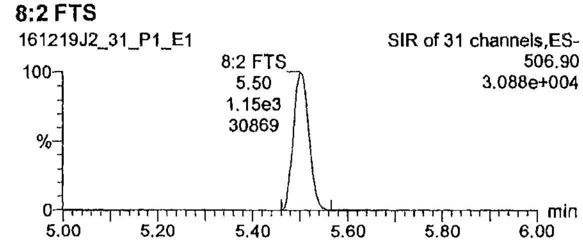
PFOS



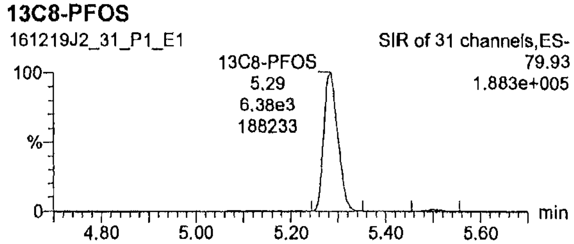
PFDA



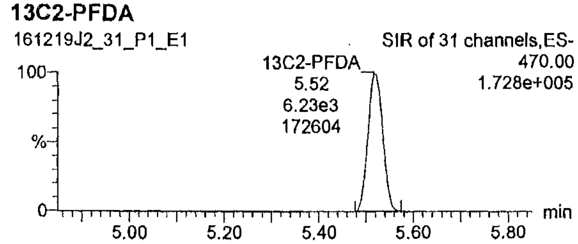
8:2 FTS



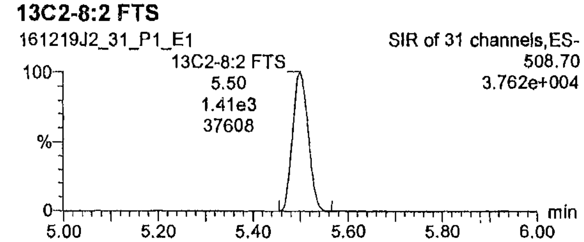
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

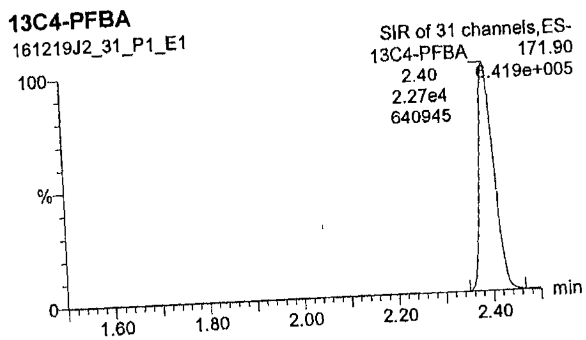


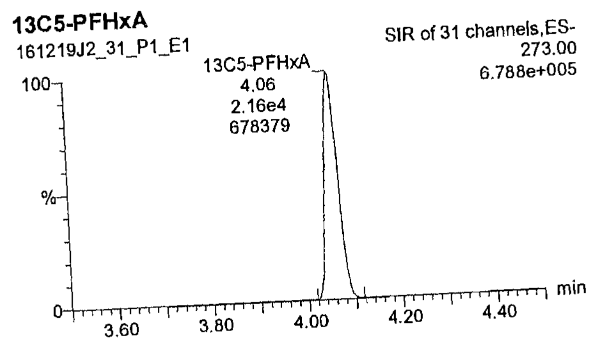
Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q2

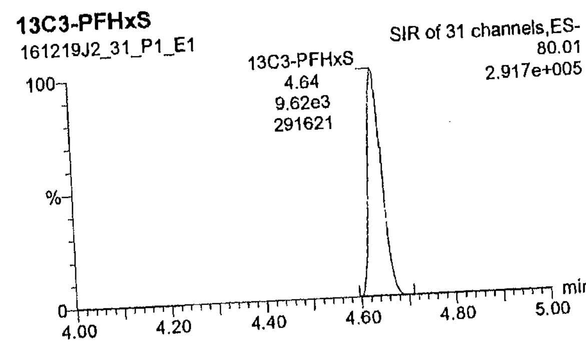
Dataset: U:\Q2.PRO\Results\161219J2\161219J2_31.qld

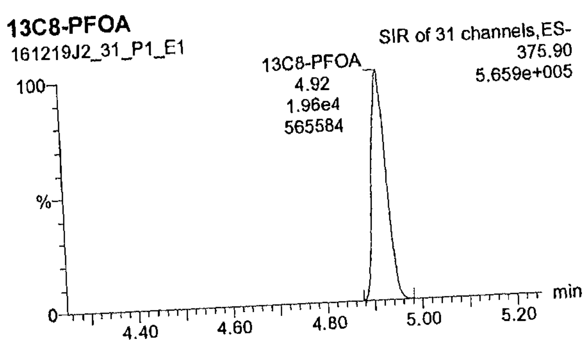
Last Altered: Tuesday, December 20, 2016 12:20:31 Pacific Standard Time
Printed: Tuesday, December 20, 2016 12:23:03 Pacific Standard Time

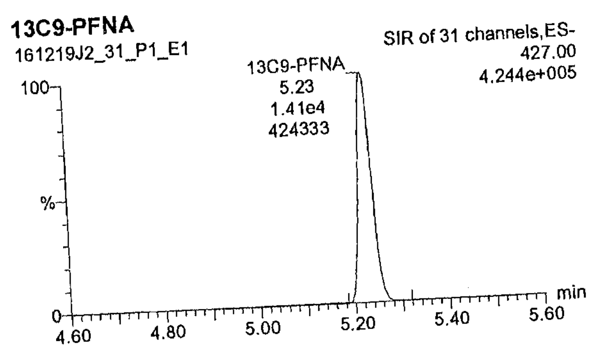
Name: 161219J2_31.wiff, Date: 19-Dec-2016, Time: 21:02:44, ID: ST161219J2-9 PFC CS3 16L1417 A, Description: PFC CS3 16L1417 A

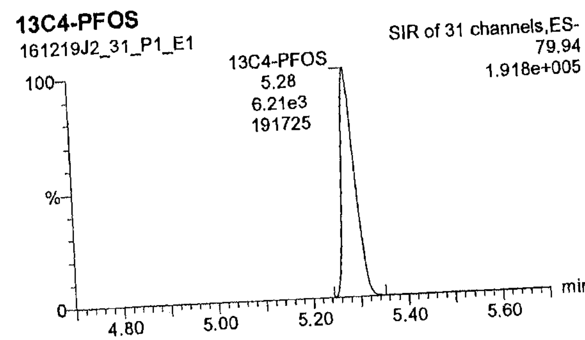


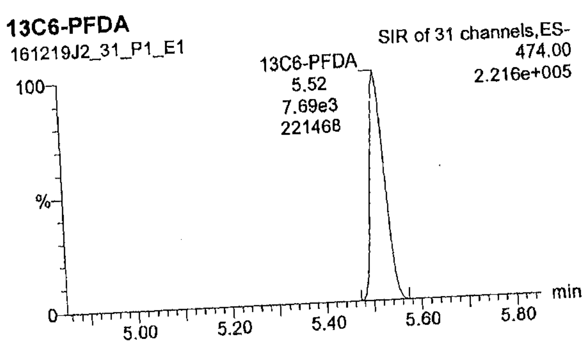












INITIAL CALIBRATION

Quantify Compound Summary Report MassLynx 4.1 SCN815
Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 09:52:31 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 09:25:21
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44 A

Compound name: PFBA
Coefficient of Determination: R^2 = 0.997989
Calibration curve: -0.00181879 * x^2 + 1.06039 * x + 0.059767
Response type: Internal Std (Ref 13), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	0.500	2.41	7.85e2	1.51e4	0.559	11.7	1.30
2	2 161219J2_04_P1_...	1.00	2.41	1.37e3	1.62e4	0.942	-5.8	1.06
3	3 161219J2_05_P1_...	2.00	2.41	2.49e3	1.48e4	1.92	-3.8	1.05
4	4 161219J2_06_P1_...	5.00	2.42	5.37e3	1.44e4	4.37	-12.7	0.931
5	5 161219J2_07_P1_...	10.0	2.40	1.53e4	1.63e4	11.2	11.9	1.17
6	6 161219J2_08_P1_...	50.0	2.40	5.30e4	1.39e4	49.1	-1.8	0.955
7	7 161219J2_09_P1_...	100	2.41	9.23e4	1.31e4	100	0.4	0.882

PW PW 12/20/16
12/20/16

Compound name: PFPeA
Coefficient of Determination: R^2 = 0.998128
Calibration curve: -0.00147383 * x^2 + 0.905172 * x + 0.0722244
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	0.500	3.47	7.29e2	1.59e4	0.554	10.9	1.15
2	2 161219J2_04_P1_...	1.00	3.46	1.24e3	1.70e4	0.927	-7.3	0.910
3	3 161219J2_05_P1_...	2.00	3.46	2.46e3	1.67e4	1.97	-1.7	0.923
4	4 161219J2_06_P1_...	5.00	3.47	5.22e3	1.62e4	4.40	-12.1	0.805
5	5 161219J2_07_P1_...	10.0	3.47	1.43e4	1.79e4	11.2	11.7	1.00
6	6 161219J2_08_P1_...	50.0	3.46	5.13e4	1.57e4	49.1	-1.9	0.819
7	7 161219J2_09_P1_...	100	3.46	9.04e4	1.48e4	100	0.5	0.761

A CS5 excluded from regression for 8:2 FTS. PW 12/20/16

AMSC 12/20/16

Quantify Compound Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 09:52:31 Pacific Standard Time

Compound name: PFBS
Coefficient of Determination: R^2 = 0.999363
Calibration curve: -0.000465434 * x^2 + 0.799957 * x + 0.0361957
Response type: Internal Std (Ref 15), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	0.500	3.72	3.91e2	1.01e4	0.559	11.7	0.966
2	2 161219J2_04_P1_...	1.00	3.71	6.59e2	1.04e4	0.942	-5.8	0.789
3	3 161219J2_05_P1_...	2.00	3.71	1.34e3	1.03e4	1.97	-1.3	0.807
4	4 161219J2_06_P1_...	5.00	3.72	2.88e3	9.93e3	4.49	-10.1	0.724
5	5 161219J2_07_P1_...	10.0	3.72	7.39e3	1.10e4	10.5	5.5	0.842
6	6 161219J2_08_P1_...	50.0	3.71	2.71e4	8.72e3	50.0	0.1	0.778
7	7 161219J2_09_P1_...	100	3.71	4.82e4	7.99e3	100	-0.0	0.753

Compound name: PFHxA
Coefficient of Determination: R^2 = 0.998473
Calibration curve: -0.00166148 * x^2 + 0.840442 * x + 0.00821583
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	0.500	4.08	6.80e2	6.77e3	0.588	17.6	1.00
2	2 161219J2_04_P1_...	1.00	4.07	1.23e3	7.71e3	0.938	-6.2	0.795
3	3 161219J2_05_P1_...	2.00	4.07	2.26e3	7.12e3	1.89	-5.5	0.796
4	4 161219J2_06_P1_...	5.00	4.07	4.94e3	6.86e3	4.31	-13.7	0.721
5	5 161219J2_07_P1_...	10.0	4.07	1.35e4	7.63e3	10.8	7.7	0.886
6	6 161219J2_08_P1_...	50.0	4.06	4.80e4	6.32e3	50.1	0.3	0.759
7	7 161219J2_09_P1_...	100	4.07	8.37e4	6.21e3	99.8	-0.2	0.674

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 09:52:31 Pacific Standard Time

Compound name: PFHpA
Coefficient of Determination: R^2 = 0.996853
Calibration curve: -0.00061703 * x^2 + 0.794927 * x + 0.0969268
Response type: Internal Std (Ref 17), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	0.500	4.59	5.91e2	1.53e4	0.487	-2.5	0.968
2	2 161219J2_04_P1_...	1.00	4.58	1.18e3	1.64e4	1.01	0.5	0.895
3	3 161219J2_05_P1_...	2.00	4.56	2.12e3	1.61e4	1.96	-2.2	0.825
4	4 161219J2_06_P1_...	5.00	4.56	4.86e3	1.66e4	4.51	-9.7	0.734
5	5 161219J2_07_P1_...	10.0	4.56	1.27e4	1.69e4	11.7	17.4	0.934
6	6 161219J2_08_P1_...	50.0	4.57	4.58e4	1.56e4	47.8	-4.5	0.733
7	7 161219J2_09_P1_...	100	4.56	8.11e4	1.37e4	101	1.0	0.741

Compound name: PFHxS
Coefficient of Determination: R^2 = 0.998162
Calibration curve: -0.00151451 * x^2 + 2.56168 * x + 0.194677
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	0.500	4.69	3.12e2	2.34e3	0.575	14.9	3.33
2	2 161219J2_04_P1_...	1.00	4.69	5.09e2	2.43e3	0.948	-5.2	2.62
3	3 161219J2_05_P1_...	2.00	4.67	9.77e2	2.53e3	1.81	-9.4	2.42
4	4 161219J2_06_P1_...	5.00	4.66	2.18e3	2.37e3	4.43	-11.3	2.30
5	5 161219J2_07_P1_...	10.0	4.66	6.05e3	2.62e3	11.2	12.5	2.88
6	6 161219J2_08_P1_...	50.0	4.67	2.20e4	2.25e3	49.1	-1.7	2.45
7	7 161219J2_09_P1_...	100	4.67	3.96e4	2.04e3	100	0.4	2.42

Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 09:52:31 Pacific Standard Time

Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.997079
Calibration curve: -0.00508679 * x^2 + 1.1595 * x + -0.158114
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	0.500	4.93	1.54e2	3.46e3	0.617	23.5	1.11
2	2 161219J2_04_P1_...	1.00	4.93	2.51e2	3.44e3	0.929	-7.1	0.914
3	3 161219J2_05_P1_...	2.00	4.91	5.90e2	3.68e3	1.88	-6.0	1.00
4	4 161219J2_06_P1_...	5.00	4.90	1.35e3	3.68e3	4.17	-16.6	0.917
5	5 161219J2_07_P1_...	10.0	4.90	3.71e3	4.06e3	10.5	4.6	1.14
6	6 161219J2_08_P1_...	50.0	4.91	1.32e4	3.58e3	51.6	3.2	0.923
7	7 161219J2_09_P1_...	100	4.91	2.15e4	4.18e3	96.7	-3.3	0.644

Compound name: PFOA
Coefficient of Determination: R^2 = 0.996296
Calibration curve: -0.00155481 * x^2 + 1.07791 * x + 0.205369
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	0.500	4.96	8.63e2	1.41e4	0.519	3.7	1.53
2	2 161219J2_04_P1_...	1.00	4.97	1.43e3	1.51e4	0.903	-9.7	1.18
3	3 161219J2_05_P1_...	2.00	4.95	2.56e3	1.36e4	2.00	-0.1	1.18
4	4 161219J2_06_P1_...	5.00	4.94	5.91e3	1.44e4	4.60	-8.1	1.03
5	5 161219J2_07_P1_...	10.0	4.94	1.60e4	1.57e4	11.8	18.0	1.27
6	6 161219J2_08_P1_...	50.0	4.94	5.08e4	1.33e4	47.4	-5.2	0.956
7	7 161219J2_09_P1_...	100	4.94	9.42e4	1.26e4	101	1.4	0.935

Quantify Compound Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

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Compound name: PFNA
Coefficient of Determination: R^2 = 0.996292
Calibration curve: -0.00139326 * x^2 + 0.898917 * x + 0.000791248
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	0.500	5.23	5.65e2	1.33e4	0.589	17.7	1.06
2	2 161219J2_04_P1_...	1.00	5.26	8.85e2	1.36e4	0.906	-9.4	0.814
3	3 161219J2_05_P1_...	2.00	5.27	1.78e3	1.36e4	1.83	-8.5	0.820
4	4 161219J2_06_P1_...	5.00	5.26	3.78e3	1.24e4	4.27	-14.5	0.764
5	5 161219J2_07_P1_...	10.0	5.26	9.91e3	1.20e4	11.7	17.1	1.03
6	6 161219J2_08_P1_...	50.0	5.26	3.93e4	1.22e4	48.5	-3.0	0.807
7	7 161219J2_09_P1_...	100	5.25	7.13e4	1.17e4	101	0.7	0.764

Compound name: PFOS
Coefficient of Determination: R^2 = 0.998110
Calibration curve: -0.00129642 * x^2 + 0.945877 * x + -0.0354924
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	0.500	5.26	2.14e2	5.33e3	0.568	13.6	1.00
2	2 161219J2_04_P1_...	1.00	5.31	4.64e2	6.56e3	0.973	-2.7	0.884
3	3 161219J2_05_P1_...	2.00	5.31	9.74e2	6.83e3	1.93	-3.7	0.891
4	4 161219J2_06_P1_...	5.00	5.31	2.02e3	6.49e3	4.17	-16.6	0.777
5	5 161219J2_07_P1_...	10.0	5.32	4.57e3	5.61e3	11.0	9.6	1.02
6	6 161219J2_08_P1_...	50.0	5.31	2.32e4	6.61e3	49.9	-0.1	0.879
7	7 161219J2_09_P1_...	100	5.30	4.22e4	6.47e3	100	-0.0	0.816

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
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Compound name: PFDA
Coefficient of Determination: R^2 = 0.997124
Calibration curve: -0.000931657 * x^2 + 0.750947 * x + 0.0271229
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	0.500	5.46	1.93e2	5.53e3	0.547	9.4	0.875
2	2 161219J2_04_P1_...	1.00	5.45	5.14e2	8.62e3	0.956	-4.4	0.744
3	3 161219J2_05_P1_...	2.00	5.51	9.86e2	8.84e3	1.83	-8.7	0.698
4	4 161219J2_06_P1_...	5.00	5.53	1.99e3	7.31e3	4.52	-9.6	0.680
5	5 161219J2_07_P1_...	10.0	5.52	4.52e3	6.55e3	11.6	16.1	0.862
6	6 161219J2_08_P1_...	50.0	5.50	2.43e4	8.93e3	48.2	-3.6	0.681
7	7 161219J2_09_P1_...	100	5.44	4.00e4	7.54e3	101	0.9	0.663

Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.990620
Calibration curve: -0.00280201 * x^2 + 1.07057 * x + -0.12583
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	0.500	5.44	5.77e1	1.42e3	0.594	18.8	1.02
2	2 161219J2_04_P1_...	1.00	5.45	1.53e2	2.17e3	0.945	-5.5	0.883
3	3 161219J2_05_P1_...	2.00	5.49	3.20e2	2.08e3	1.93	-3.6	0.964
4	4 161219J2_06_P1_...	5.00	5.52	5.58e2	1.76e3	3.85	-22.9	0.792
5	5 161219J2_07_P1_...	10.0	5.51	1.52e3	1.62e3	11.4	13.7	1.17
6	6 161219J2_08_P1_...	50.0	5.48	7.78e3	2.10e3	49.8	-0.4	0.925
7	7 161219J2_09_P1_...	100 A	5.44	8.80e3	1.62e3	80.3	-19.7	0.678

A Excluded from regression curve.
PLJ
12/20/16

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
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Compound name: 13C3-PFBA
Response Factor: 0.857376
RRF SD: 0.017505, Relative SD: 2.04169
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	2.41	1.51e4	1.81e4	12.1	-3.1	0.831
2	2 161219J2_04_P1_...	12.5	2.41	1.62e4	1.91e4	12.3	-1.4	0.845
3	3 161219J2_05_P1_...	12.5	2.41	1.48e4	1.73e4	12.5	0.1	0.858
4	4 161219J2_06_P1_...	12.5	2.41	1.44e4	1.63e4	12.9	3.5	0.887
5	5 161219J2_07_P1_...	12.5	2.41	1.63e4	1.91e4	12.5	-0.1	0.856
6	6 161219J2_08_P1_...	12.5	2.40	1.39e4	1.60e4	12.7	1.2	0.868
7	7 161219J2_09_P1_...	12.5	2.40	1.31e4	1.53e4	12.5	-0.2	0.856

Compound name: 13C3-PFPeA
Response Factor: 0.866322
RRF SD: 0.0498848, Relative SD: 5.75823
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	3.47	1.59e4	2.03e4	11.3	-9.8	0.781
2	2 161219J2_04_P1_...	12.5	3.46	1.70e4	2.07e4	11.9	-5.0	0.823
3	3 161219J2_05_P1_...	12.5	3.46	1.67e4	1.94e4	12.4	-0.8	0.859
4	4 161219J2_06_P1_...	12.5	3.46	1.62e4	1.79e4	13.1	4.9	0.909
5	5 161219J2_07_P1_...	12.5	3.46	1.79e4	2.05e4	12.6	0.6	0.872
6	6 161219J2_08_P1_...	12.5	3.46	1.57e4	1.71e4	13.3	6.0	0.919
7	7 161219J2_09_P1_...	12.5	3.46	1.48e4	1.64e4	13.0	4.1	0.902

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

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Compound name: 13C3-PFBS
Response Factor: 0.517615
RRF SD: 0.0246232, Relative SD: 4.75704
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	3.72	1.01e4	2.03e4	12.0	-3.8	0.498
2	2 161219J2_04_P1_...	12.5	3.71	1.04e4	2.07e4	12.2	-2.6	0.504
3	3 161219J2_05_P1_...	12.5	3.71	1.03e4	1.94e4	12.9	3.0	0.533
4	4 161219J2_06_P1_...	12.5	3.71	9.93e3	1.79e4	13.4	7.5	0.556
5	5 161219J2_07_P1_...	12.5	3.71	1.10e4	2.05e4	12.9	3.3	0.535
6	6 161219J2_08_P1_...	12.5	3.70	8.72e3	1.71e4	12.3	-1.3	0.511
7	7 161219J2_09_P1_...	12.5	3.71	7.99e3	1.64e4	11.7	-6.1	0.486

Compound name: 13C2-PFHxA
Response Factor: 0.920015
RRF SD: 0.0410021, Relative SD: 4.45668
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	5.00	4.08	6.77e3	2.03e4	4.53	-9.5	0.833
2	2 161219J2_04_P1_...	5.00	4.07	7.71e3	2.07e4	5.06	1.3	0.932
3	3 161219J2_05_P1_...	5.00	4.07	7.12e3	1.94e4	4.98	-0.4	0.917
4	4 161219J2_06_P1_...	5.00	4.07	6.86e3	1.79e4	5.22	4.3	0.960
5	5 161219J2_07_P1_...	5.00	4.07	7.63e3	2.05e4	5.05	0.9	0.929
6	6 161219J2_08_P1_...	5.00	4.06	6.32e3	1.71e4	5.03	0.6	0.926
7	7 161219J2_09_P1_...	5.00	4.07	6.21e3	1.64e4	5.13	2.7	0.945

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

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Compound name: 13C4-PFHpA
Response Factor: 0.838835
RRF SD: 0.0628794, Relative SD: 7.49604
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	4.58	1.53e4	2.03e4	11.2	-10.5	0.751
2	2 161219J2_04_P1_...	12.5	4.58	1.64e4	2.07e4	11.8	-5.4	0.793
3	3 161219J2_05_P1_...	12.5	4.56	1.61e4	1.94e4	12.4	-1.2	0.829
4	4 161219J2_06_P1_...	12.5	4.56	1.66e4	1.79e4	13.8	10.5	0.927
5	5 161219J2_07_P1_...	12.5	4.56	1.69e4	2.05e4	12.3	-1.6	0.825
6	6 161219J2_08_P1_...	12.5	4.56	1.56e4	1.71e4	13.6	9.1	0.915
7	7 161219J2_09_P1_...	12.5	4.56	1.37e4	1.64e4	12.4	-0.9	0.832

Compound name: 18O2-PFHxS
Response Factor: 0.278532
RRF SD: 0.0104567, Relative SD: 3.7542
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	4.69	2.34e3	8.80e3	12.0	-4.4	0.266
2	2 161219J2_04_P1_...	12.5	4.68	2.43e3	9.14e3	11.9	-4.5	0.266
3	3 161219J2_05_P1_...	12.5	4.66	2.53e3	8.80e3	12.9	3.1	0.287
4	4 161219J2_06_P1_...	12.5	4.66	2.37e3	8.31e3	12.8	2.3	0.285
5	5 161219J2_07_P1_...	12.5	4.66	2.62e3	9.61e3	12.2	-2.0	0.273
6	6 161219J2_08_P1_...	12.5	4.66	2.25e3	7.69e3	13.1	5.1	0.293
7	7 161219J2_09_P1_...	12.5	4.67	2.04e3	7.31e3	12.6	0.4	0.280

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

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Compound name: 13C2-6:2 FTS
Response Factor: 0.176915
RRF SD: 0.0262655, Relative SD: 14.8463
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	4.93	3.46e3	2.17e4	11.3	-9.7	0.160
2	2 161219J2_04_P1_...	12.5	4.93	3.44e3	2.26e4	10.8	-13.9	0.152
3	3 161219J2_05_P1_...	12.5	4.91	3.68e3	2.24e4	11.6	-7.4	0.164
4	4 161219J2_06_P1_...	12.5	4.90	3.68e3	2.10e4	12.4	-0.8	0.176
5	5 161219J2_07_P1_...	12.5	4.90	4.06e3	2.40e4	11.9	-4.5	0.169
6	6 161219J2_08_P1_...	12.5	4.90	3.58e3	1.91e4	13.2	5.8	0.187
7	7 161219J2_09_P1_...	12.5	4.90	4.18e3	1.81e4	16.3	30.4	0.231

Compound name: 13C2-PFOA
Response Factor: 0.665303
RRF SD: 0.0323128, Relative SD: 4.85685
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	4.96	1.41e4	2.17e4	12.2	-2.1	0.651
2	2 161219J2_04_P1_...	12.5	4.96	1.51e4	2.26e4	12.6	0.7	0.670
3	3 161219J2_05_P1_...	12.5	4.95	1.36e4	2.24e4	11.4	-9.0	0.605
4	4 161219J2_06_P1_...	12.5	4.94	1.44e4	2.10e4	12.9	3.3	0.687
5	5 161219J2_07_P1_...	12.5	4.94	1.57e4	2.40e4	12.3	-1.8	0.653
6	6 161219J2_08_P1_...	12.5	4.94	1.33e4	1.91e4	13.1	4.5	0.695
7	7 161219J2_09_P1_...	12.5	4.94	1.26e4	1.81e4	13.1	4.5	0.695

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

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Compound name: 13C5-PFNA
Response Factor: 0.957623
RRF SD: 0.0642928, Relative SD: 6.71379
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	5.22	1.33e4	1.45e4	12.0	-3.7	0.923
2	2 161219J2_04_P1_...	12.5	5.26	1.36e4	1.36e4	13.0	3.9	0.995
3	3 161219J2_05_P1_...	12.5	5.27	1.36e4	1.35e4	13.1	5.0	1.01
4	4 161219J2_06_P1_...	12.5	5.26	1.24e4	1.19e4	13.6	8.6	1.04
5	5 161219J2_07_P1_...	12.5	5.26	1.20e4	1.40e4	11.2	-10.5	0.857
6	6 161219J2_08_P1_...	12.5	5.26	1.22e4	1.24e4	12.8	2.1	0.978
7	7 161219J2_09_P1_...	12.5	5.25	1.17e4	1.29e4	11.8	-5.3	0.907

Compound name: 13C8-PFOS
Response Factor: 0.949703
RRF SD: 0.0373611, Relative SD: 3.93397
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	5.26	5.33e3	5.80e3	12.1	-3.2	0.919
2	2 161219J2_04_P1_...	12.5	5.30	6.56e3	6.90e3	12.5	0.1	0.951
3	3 161219J2_05_P1_...	12.5	5.31	6.83e3	7.09e3	12.7	1.5	0.964
4	4 161219J2_06_P1_...	12.5	5.31	6.49e3	6.39e3	13.4	6.8	1.01
5	5 161219J2_07_P1_...	12.5	5.31	5.61e3	6.18e3	11.9	-4.5	0.907
6	6 161219J2_08_P1_...	12.5	5.31	6.61e3	7.17e3	12.1	-3.0	0.921
7	7 161219J2_09_P1_...	12.5	5.29	6.47e3	6.67e3	12.8	2.2	0.971

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Compound name: 13C2-PFDA
Response Factor: 0.822051
RRF SD: 0.0437009, Relative SD: 5.31608
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	5.45	5.53e3	7.43e3	11.3	-9.5	0.744
2	2 161219J2_04_P1_...	12.5	5.45	8.62e3	1.05e4	12.5	-0.1	0.821
3	3 161219J2_05_P1_...	12.5	5.51	8.84e3	1.05e4	12.7	2.0	0.838
4	4 161219J2_06_P1_...	12.5	5.53	7.31e3	9.16e3	12.1	-2.9	0.799
5	5 161219J2_07_P1_...	12.5	5.52	6.55e3	8.05e3	12.4	-1.0	0.813
6	6 161219J2_08_P1_...	12.5	5.49	8.93e3	1.02e4	13.3	6.1	0.872
7	7 161219J2_09_P1_...	12.5	5.44	7.54e3	8.69e3	13.2	5.5	0.867

Compound name: 13C2-8:2 FTS
Response Factor: 0.197088
RRF SD: 0.00752953, Relative SD: 3.82039
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	5.44	1.42e3	7.43e3	12.1	-3.3	0.191
2	2 161219J2_04_P1_...	12.5	5.44	2.17e3	1.05e4	13.1	4.6	0.206
3	3 161219J2_05_P1_...	12.5	5.49	2.08e3	1.05e4	12.5	-0.1	0.197
4	4 161219J2_06_P1_...	12.5	5.51	1.76e3	9.16e3	12.2	-2.4	0.192
5	5 161219J2_07_P1_...	12.5	5.51	1.62e3	8.05e3	12.8	2.3	0.202
6	6 161219J2_08_P1_...	12.5	5.48	2.10e3	1.02e4	13.0	4.1	0.205
7	7 161219J2_09_P1_...	12.5	5.43	1.62e3	8.69e3	11.8	-5.3	0.187

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
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Compound name: 13C4-PFBA
Response Factor: 1
RRF SD: 9.06493e-017, Relative SD: 9.06493e-015
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	2.41	1.81e4	1.81e4	12.5	0.0	1.00
2	2 161219J2_04_P1_...	12.5	2.40	1.91e4	1.91e4	12.5	0.0	1.00
3	3 161219J2_05_P1_...	12.5	2.41	1.73e4	1.73e4	12.5	0.0	1.00
4	4 161219J2_06_P1_...	12.5	2.41	1.63e4	1.63e4	12.5	0.0	1.00
5	5 161219J2_07_P1_...	12.5	2.40	1.91e4	1.91e4	12.5	0.0	1.00
6	6 161219J2_08_P1_...	12.5	2.40	1.60e4	1.60e4	12.5	0.0	1.00
7	7 161219J2_09_P1_...	12.5	2.40	1.53e4	1.53e4	12.5	0.0	1.00

Compound name: 13C5-PFHxA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	4.08	2.03e4	2.03e4	12.5	0.0	1.00
2	2 161219J2_04_P1_...	12.5	4.07	2.07e4	2.07e4	12.5	0.0	1.00
3	3 161219J2_05_P1_...	12.5	4.07	1.94e4	1.94e4	12.5	0.0	1.00
4	4 161219J2_06_P1_...	12.5	4.07	1.79e4	1.79e4	12.5	0.0	1.00
5	5 161219J2_07_P1_...	12.5	4.07	2.05e4	2.05e4	12.5	0.0	1.00
6	6 161219J2_08_P1_...	12.5	4.06	1.71e4	1.71e4	12.5	0.0	1.00
7	7 161219J2_09_P1_...	12.5	4.07	1.64e4	1.64e4	12.5	0.0	1.00

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
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Compound name: 13C3-PFHxS
Response Factor: 1
RRF SD: 9.06493e-017, Relative SD: 9.06493e-015
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	4.69	8.80e3	8.80e3	12.5	0.0	1.00
2	2 161219J2_04_P1_...	12.5	4.68	9.14e3	9.14e3	12.5	0.0	1.00
3	3 161219J2_05_P1_...	12.5	4.66	8.80e3	8.80e3	12.5	0.0	1.00
4	4 161219J2_06_P1_...	12.5	4.66	8.31e3	8.31e3	12.5	0.0	1.00
5	5 161219J2_07_P1_...	12.5	4.66	9.61e3	9.61e3	12.5	0.0	1.00
6	6 161219J2_08_P1_...	12.5	4.66	7.69e3	7.69e3	12.5	0.0	1.00
7	7 161219J2_09_P1_...	12.5	4.67	7.31e3	7.31e3	12.5	0.0	1.00

Compound name: 13C8-PFOA
Response Factor: 1
RRF SD: 9.06493e-017, Relative SD: 9.06493e-015
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	4.96	2.17e4	2.17e4	12.5	0.0	1.00
2	2 161219J2_04_P1_...	12.5	4.96	2.26e4	2.26e4	12.5	0.0	1.00
3	3 161219J2_05_P1_...	12.5	4.95	2.24e4	2.24e4	12.5	0.0	1.00
4	4 161219J2_06_P1_...	12.5	4.94	2.10e4	2.10e4	12.5	0.0	1.00
5	5 161219J2_07_P1_...	12.5	4.94	2.40e4	2.40e4	12.5	0.0	1.00
6	6 161219J2_08_P1_...	12.5	4.94	1.91e4	1.91e4	12.5	0.0	1.00
7	7 161219J2_09_P1_...	12.5	4.94	1.81e4	1.81e4	12.5	0.0	1.00

Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
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Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 9.06493e-017, Relative SD: 9.06493e-015
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	5.22	1.45e4	1.45e4	12.5	0.0	1.00
2	2 161219J2_04_P1_...	12.5	5.26	1.36e4	1.36e4	12.5	0.0	1.00
3	3 161219J2_05_P1_...	12.5	5.26	1.35e4	1.35e4	12.5	0.0	1.00
4	4 161219J2_06_P1_...	12.5	5.25	1.19e4	1.19e4	12.5	0.0	1.00
5	5 161219J2_07_P1_...	12.5	5.26	1.40e4	1.40e4	12.5	0.0	1.00
6	6 161219J2_08_P1_...	12.5	5.26	1.24e4	1.24e4	12.5	0.0	1.00
7	7 161219J2_09_P1_...	12.5	5.25	1.29e4	1.29e4	12.5	0.0	1.00

Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 1.28198e-016, Relative SD: 1.28198e-014
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	5.26	5.80e3	5.80e3	12.5	0.0	1.00
2	2 161219J2_04_P1_...	12.5	5.30	6.90e3	6.90e3	12.5	0.0	1.00
3	3 161219J2_05_P1_...	12.5	5.31	7.09e3	7.09e3	12.5	0.0	1.00
4	4 161219J2_06_P1_...	12.5	5.31	6.39e3	6.39e3	12.5	0.0	1.00
5	5 161219J2_07_P1_...	12.5	5.31	6.18e3	6.18e3	12.5	0.0	1.00
6	6 161219J2_08_P1_...	12.5	5.31	7.17e3	7.17e3	12.5	0.0	1.00
7	7 161219J2_09_P1_...	12.5	5.29	6.67e3	6.67e3	12.5	0.0	1.00

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
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Compound name: 13C6-PFDA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	12.5	5.45	7.43e3	7.43e3	12.5	0.0	1.00
2	2 161219J2_04_P1_...	12.5	5.45	1.05e4	1.05e4	12.5	0.0	1.00
3	3 161219J2_05_P1_...	12.5	5.51	1.05e4	1.05e4	12.5	0.0	1.00
4	4 161219J2_06_P1_...	12.5	5.53	9.16e3	9.16e3	12.5	0.0	1.00
5	5 161219J2_07_P1_...	12.5	5.52	8.05e3	8.05e3	12.5	0.0	1.00
6	6 161219J2_08_P1_...	12.5	5.49	1.02e4	1.02e4	12.5	0.0	1.00
7	7 161219J2_09_P1_...	12.5	5.44	8.69e3	8.69e3	12.5	0.0	1.00

Compound name: Total PFBS
Coefficient of Determination: R^2 = 0.999363
Calibration curve: -0.000465434 * x^2 + 0.799957 * x + 0.0361957
Response type: Internal Std (Ref 15), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	0.500			1.01e4	0.559		
2	2 161219J2_04_P1_...	1.00			1.04e4	0.942		
3	3 161219J2_05_P1_...	2.00			1.03e4	1.97		
4	4 161219J2_06_P1_...	5.00			9.93e3	4.49		
5	5 161219J2_07_P1_...	10.0			1.10e4	10.5		
6	6 161219J2_08_P1_...	50.0			8.72e3	50.0		
7	7 161219J2_09_P1_...	100			7.99e3	100		

Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 09:52:31 Pacific Standard Time

Compound name: Total PFHxS
Coefficient of Determination: R^2 = 0.998162
Calibration curve: -0.00151451 * x^2 + 2.56168 * x + 0.194677
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161219J2_03_P1_...	0.500			2.34e3	0.578		
2	2	161219J2_04_P1_...	1.00			2.43e3	1.08		
3	3	161219J2_05_P1_...	2.00			2.53e3	2.12		
4	4	161219J2_06_P1_...	5.00			2.37e3	5.24		
5	5	161219J2_07_P1_...	10.0			2.62e3	13.3		
6	6	161219J2_08_P1_...	50.0			2.25e3	58.9		
7	7	161219J2_09_P1_...	100			2.04e3	120		

Compound name: Total PFOA
Coefficient of Determination: R^2 = 0.996296
Calibration curve: -0.00155481 * x^2 + 1.07791 * x + 0.205369
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161219J2_03_P1_...	0.500			1.41e4	0.519		
2	2	161219J2_04_P1_...	1.00			1.51e4	0.903		
3	3	161219J2_05_P1_...	2.00			1.36e4	2.00		
4	4	161219J2_06_P1_...	5.00			1.44e4	4.60		
5	5	161219J2_07_P1_...	10.0			1.57e4	11.8		
6	6	161219J2_08_P1_...	50.0			1.33e4	47.4		
7	7	161219J2_09_P1_...	100			1.26e4	101		

Quantify Compound Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 09:52:31 Pacific Standard Time

Compound name: Total PFOS
Coefficient of Determination: R^2 = 0.998110
Calibration curve: -0.00129642 * x^2 + 0.945877 * x + -0.0354924
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161219J2_03_P1_...	0.500			5.33e3	0.826		
2	2 161219J2_04_P1_...	1.00			6.56e3	1.46		
3	3 161219J2_05_P1_...	2.00			6.83e3	2.73		
4	4 161219J2_06_P1_...	5.00			6.49e3	5.70		
5	5 161219J2_07_P1_...	10.0			5.61e3	15.8		
6	6 161219J2_08_P1_...	50.0			6.61e3	66.8		
7	7 161219J2_09_P1_...	100			6.47e3	133		

	Sample Name	Acquisition Date	Sample ID	Sample Comment
1	161219J2_01	12/19/2016 14:55:35	IPA	IPA
2	161219J2_02	12/19/2016 15:07:52	ST161219J2-1 PFC CS(-2) 16L1412 A	PFC CS(-2) 16L1412 A
3	161219J2_03	12/19/2016 15:20:04	ST161219J2-2 PFC CS(-1) 16L1413 A	PFC CS(-1) 16L1413 A
4	161219J2_04	12/19/2016 15:32:16	ST161219J2-3 PFC CS0 16L1414 A	PFC CS0 16L1414 A
5	161219J2_05	12/19/2016 15:44:32	ST161219J2-4 PFC CS1 16L1415 A	PFC CS1 16L1415 A
6	161219J2_06	12/19/2016 15:56:48	ST161219J2-5 PFC CS2 16L1416 A	PFC CS2 16L1416 A
7	161219J2_07	12/19/2016 16:09:01	ST161219J2-6 PFC CS3 16L1417 A	PFC CS3 16L1417 A
8	161219J2_08	12/19/2016 16:21:15	ST161219J2-7 PFC CS4 16L1418 A	PFC CS4 16L1418 A
9	161219J2_09	12/19/2016 16:33:30	ST161219J2-8 PFC CS5 16L1419 A	PFC CS5 16L1419 A
10	161219J2_10	12/19/2016 16:45:44	IPA	IPA
11	161219J2_11	12/19/2016 16:57:58	SS161219J2-1 PFC SSS 16K2201 A	PFC SSS 16K2201 A
12	161219J2_12	12/19/2016 17:10:10	IPA	IPA
13	161219J2_13	12/19/2016 17:22:27	B6L0076-BS1	OPR
14	161219J2_14	12/19/2016 17:34:40	B6L0088-BS1	OPR
15	161219J2_15	12/19/2016 17:46:54	IPA	IPA
16	161219J2_16	12/19/2016 17:59:08	B6L0076-BLK1	Method Blank
17	161219J2_17	12/19/2016 18:11:24	B6L0088-BLK1	Method Blank
18	161219J2_18	12/19/2016 18:23:38	1601554-01	GW-EB-Water Level
19	161219J2_19	12/19/2016 18:35:49	1601554-02	FB-DI Water
20	161219J2_20	12/19/2016 18:48:04	1601554-03	GW-FPC-3A
21	161219J2_21	12/19/2016 19:00:17	1601554-04	GW-FPC-3B
22	161219J2_22	12/19/2016 19:12:31	1601554-05	GW-FPC-3B-Dup
23	161219J2_23	12/19/2016 19:24:45	1601554-06	GW-FPC-3C
24	161219J2_24	12/19/2016 19:37:00	B6L0076-MS1	Matrix Spike
25	161219J2_25	12/19/2016 19:49:14	B6L0076-MSD1	Matrix Spike Dup
26	161219J2_26	12/19/2016 20:01:29	1601557-01	MATPEW008
27	161219J2_27	12/19/2016 20:13:44	1601557-02	MATPEW004
28	161219J2_28	12/19/2016 20:26:00	1601557-03	MATPEW044
29	161219J2_29	12/19/2016 20:38:16	1601557-04	MATPEW012
30	161219J2_30	12/19/2016 20:50:30	IPA	IPA
31	161219J2_31	12/19/2016 21:02:44	ST161219J2-9 PFC CS3 16L1417 A	PFC CS3 16L1417 A
32	161219J2_32	12/19/2016 21:14:56	IPA	IPA
33	161219J2_33	12/19/2016 21:27:12	1601557-05	MATPEW013
34	161219J2_34	12/19/2016 21:39:25	1601557-06	MATPEW015
35	161219J2_35	12/19/2016 21:51:40	1601557-07	MATPEW001
36	161219J2_36	12/19/2016 22:03:53	B6L0088-MS1	Matrix Spike
37	161219J2_37	12/19/2016 22:16:08	B6L0088-MSD1	Matrix Spike Dup
38	161219J2_38	12/19/2016 22:28:22	IPA	IPA
39	161219J2_39	12/19/2016 22:40:37	B6L0098-BS1	OPR
40	161219J2_40	12/19/2016 22:52:52	IPA	IPA
41	161219J2_41	12/19/2016 23:05:07	B6L0098-BLK1	Method Blank
42	161219J2_42	12/19/2016 23:17:24	IPA	IPA
43	161219J2_43	12/19/2016 23:29:39	1601563-01	MATPEW005
44	161219J2_44	12/19/2016 23:41:54	1601563-02	MATPEW006
45	161219J2_45	12/19/2016 23:54:11	1601563-03	MATPEW003
46	161219J2_46	12/20/2016 00:06:26	1601563-04	MATPEW011
47	161219J2_47	12/20/2016 00:18:39	1601563-05	MATPEW021
48	161219J2_48	12/20/2016 00:30:56	1601563-06	MATPEW022
49	161219J2_49	12/20/2016 00:43:13	IPA	IPA
50	161219J2_50	12/20/2016 00:55:28	ST161219J2-10 PFC CS3 16L1417 A	PFC CS3 16L1417 A
51	161219J2_51	12/20/2016 01:07:40	IPA	IPA
52	161219J2_52	12/20/2016 01:19:55	1601563-07	GW-EB-Water Level
53	161219J2_53	12/20/2016 01:32:10	1601563-08	FB-DI Water
54	161219J2_54	12/20/2016 01:44:26	1601563-09	GW-FPC-3A
55	161219J2_55	12/20/2016 01:56:41	1601563-10	GW-FPC-3B
56	161219J2_56	12/20/2016 02:09:00	1601563-11	GW-FPC-3B-Dup

	Sample Name	Acquisition Date	Sample ID	Sample Comment
57	161219J2_57	12/20/2016 02:21:13	1601563-12	GW-FPC-3C
58	161219J2_58	12/20/2016 02:33:26	1601563-13	MATPEW008
59	161219J2_59	12/20/2016 02:45:40	1601563-14	MATPEW004
60	161219J2_60	12/20/2016 02:57:54	1601563-15	MATPEW044
61	161219J2_61	12/20/2016 03:10:08	1601563-16	MATPEW012
62	161219J2_62	12/20/2016 03:22:23	IPA	IPA
63	161219J2_63	12/20/2016 03:34:38	ST161219J2-11 PFC CS3 16L1417 A	PFC CS3 16L1417 A
64	161219J2_64	12/20/2016 03:46:53	IPA	IPA
65	161219J2_65	12/20/2016 03:59:07	1601563-17	MATPEW018
66	161219J2_66	12/20/2016 04:11:23	B6L0098-MS1	Matrix Spike
67	161219J2_67	12/20/2016 04:23:38	B6L0098-MSD1	Matrix Spike Dup
68	161219J2_68	12/20/2016 04:35:53	IPA	IPA
69	161219J2_69	12/20/2016 04:48:04	ST161219J2-12 PFC CS3 16L1417 A	PFC CS3 16L1417 A
70	161219J2_70	12/20/2016 05:00:21	IPA	IPA

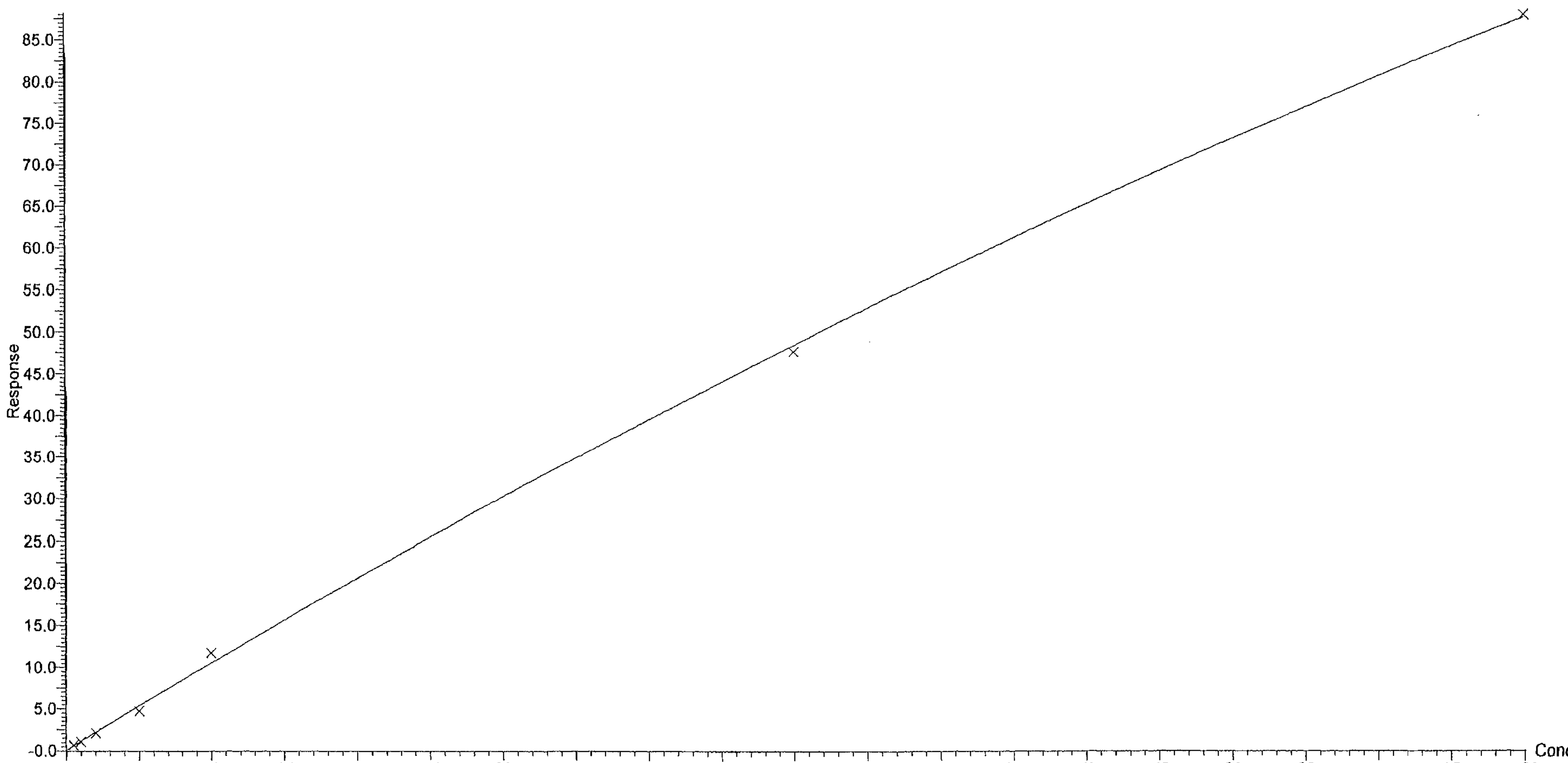
Quantify Calibration Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:20:34 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 09:25:21
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

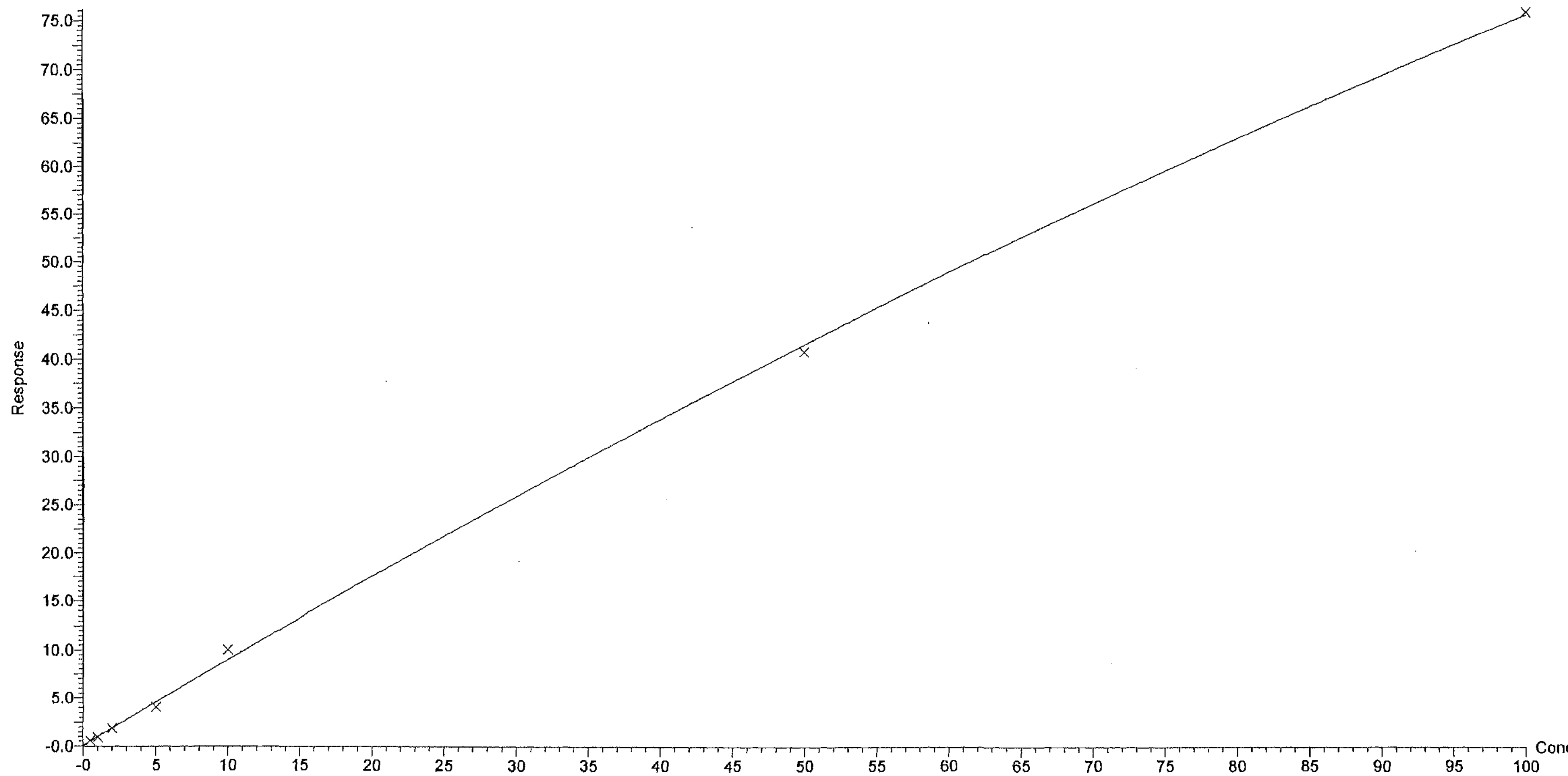
Compound name: PFBA
Coefficient of Determination: R^2 = 0.997989
Calibration curve: -0.00181879 * x^2 + 1.06039 * x + 0.059767
Response type: Internal Std (Ref 13), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:20:34 Pacific Standard Time

Compound name: PFPeA
Coefficient of Determination: R^2 = 0.998128
Calibration curve: -0.00147383 * x^2 + 0.905172 * x + 0.0722244
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

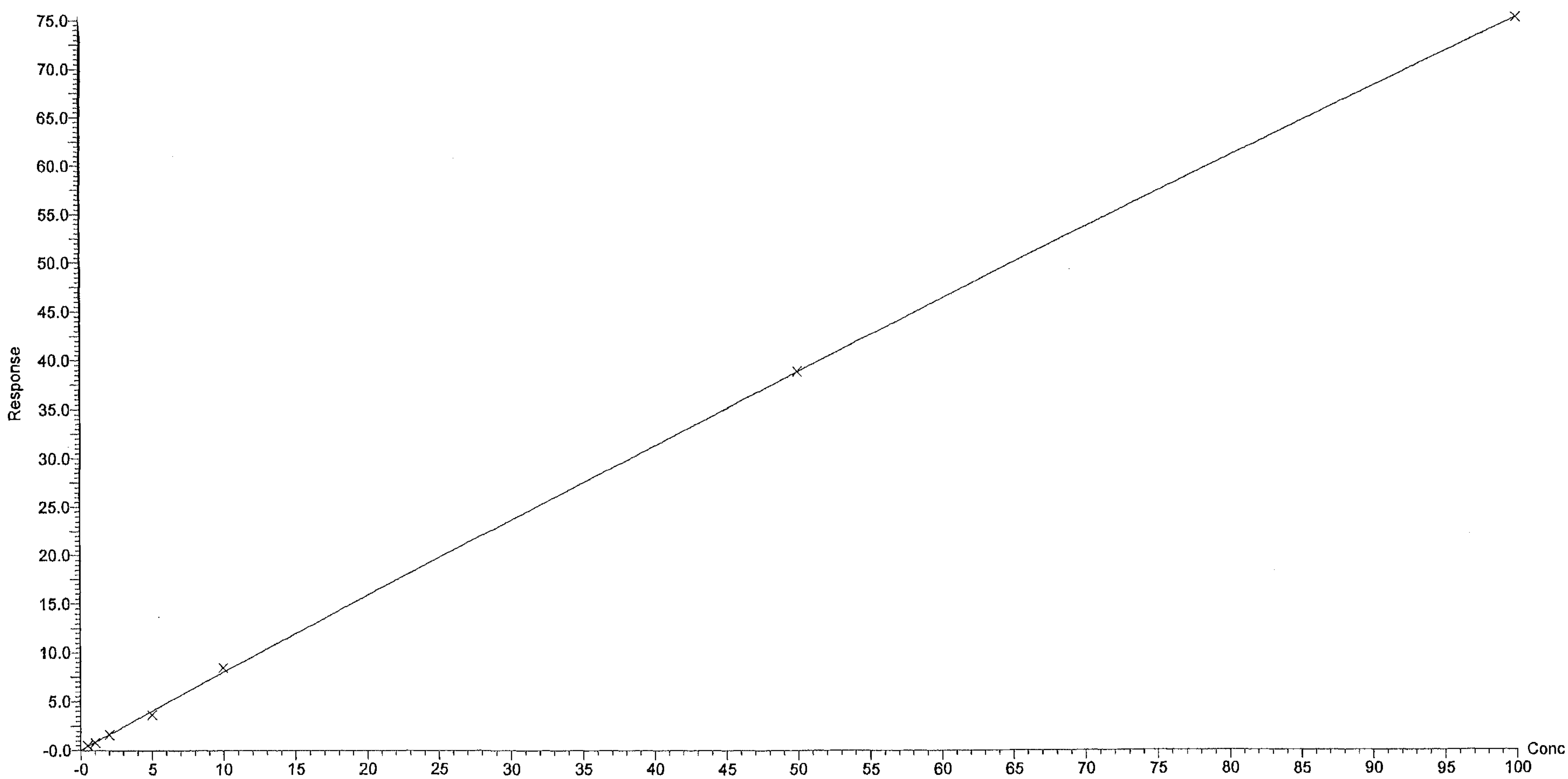


Quantify Calibration Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:20:34 Pacific Standard Time

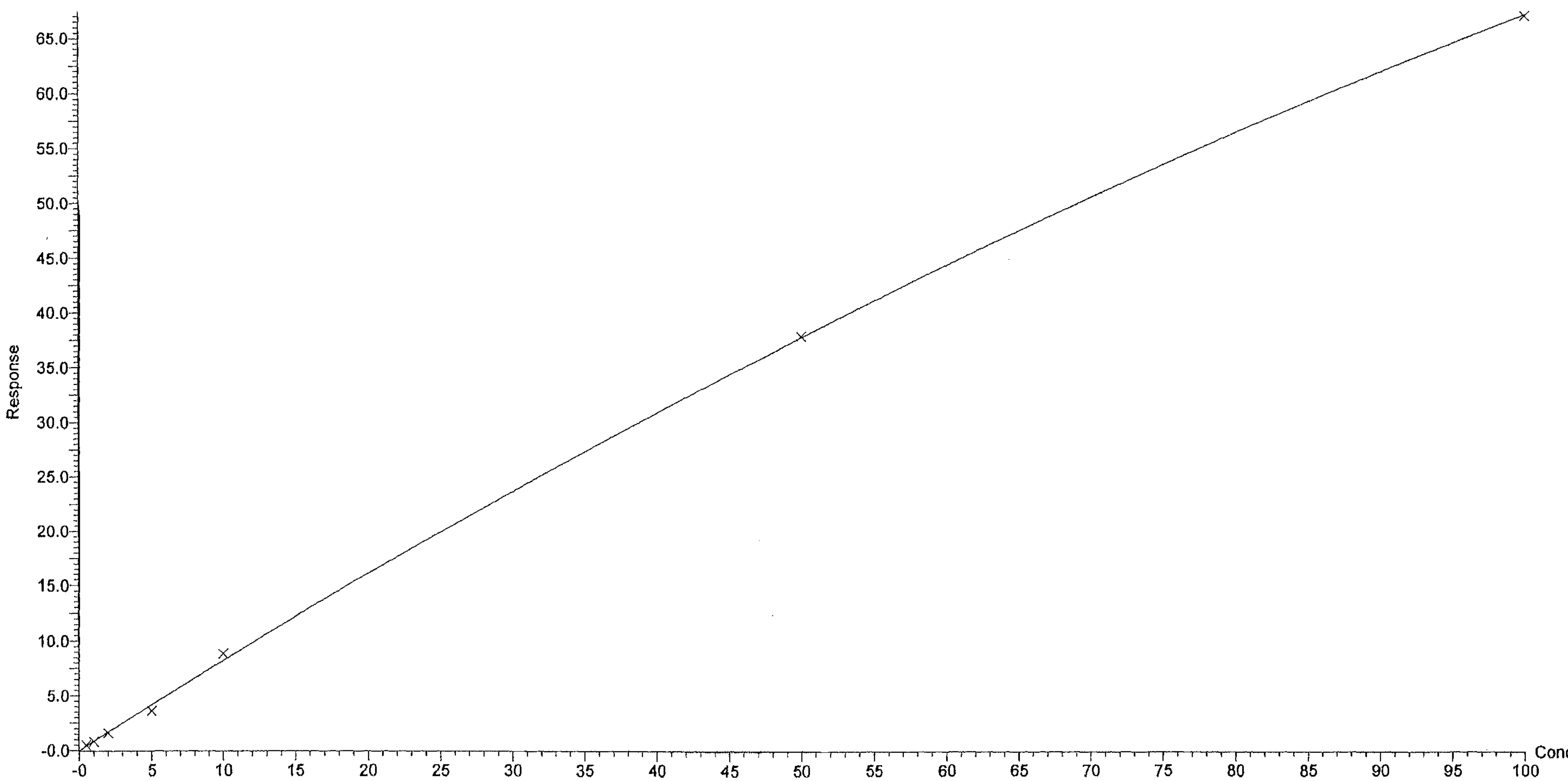
Compound name: PFBS
Coefficient of Determination: R^2 = 0.999363
Calibration curve: -0.000465434 * x^2 + 0.799957 * x + 0.0361957
Response type: Internal Std (Ref 15), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:20:34 Pacific Standard Time

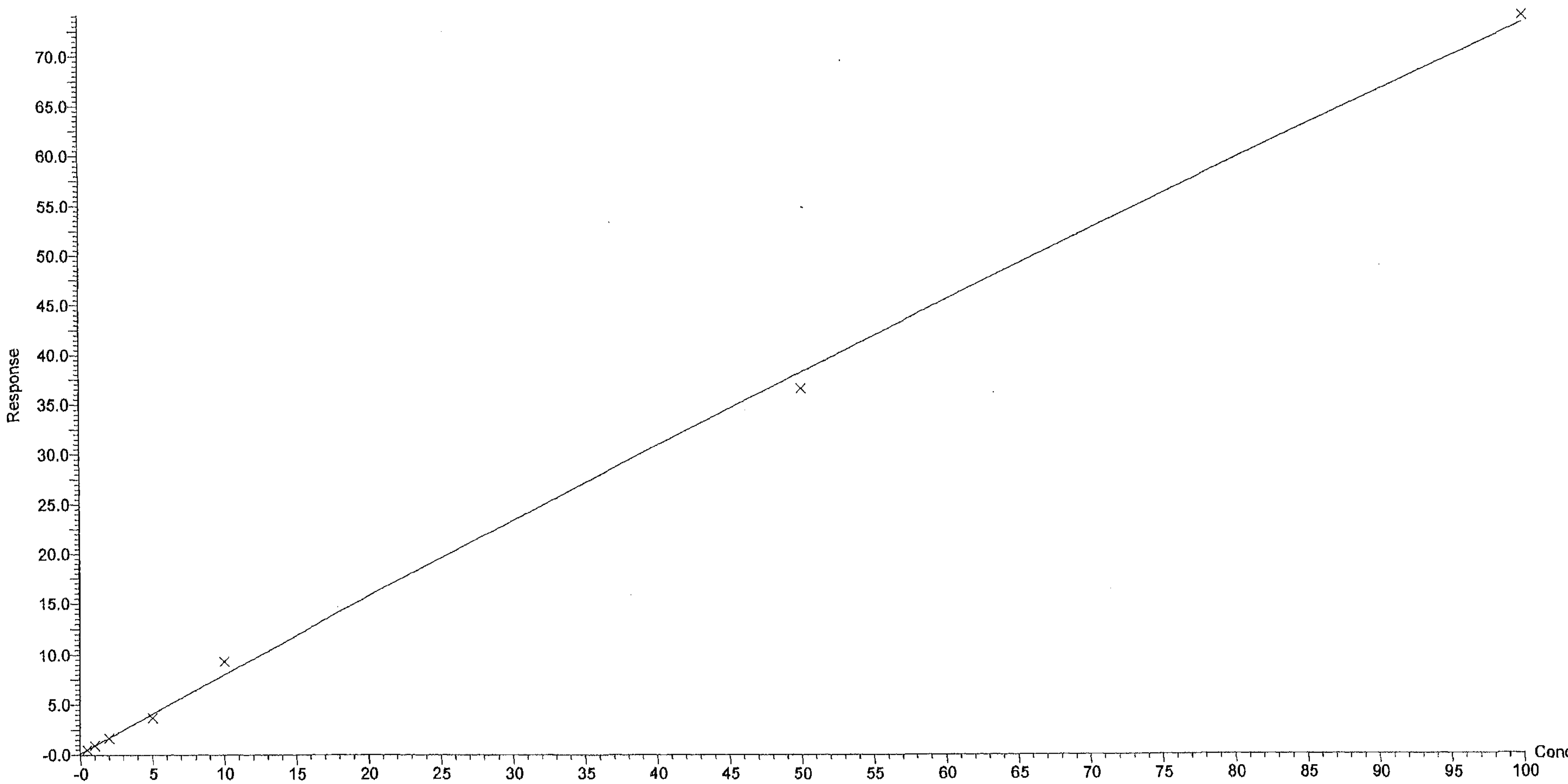
Compound name: PFHxA
Coefficient of Determination: R^2 = 0.998473
Calibration curve: -0.00166148 * x^2 + 0.840442 * x + 0.00821583
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:20:34 Pacific Standard Time

Compound name: PFHpA
Coefficient of Determination: R^2 = 0.996853
Calibration curve: -0.00061703 * x^2 + 0.794927 * x + 0.0969268
Response type: Internal Std (Ref 17), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

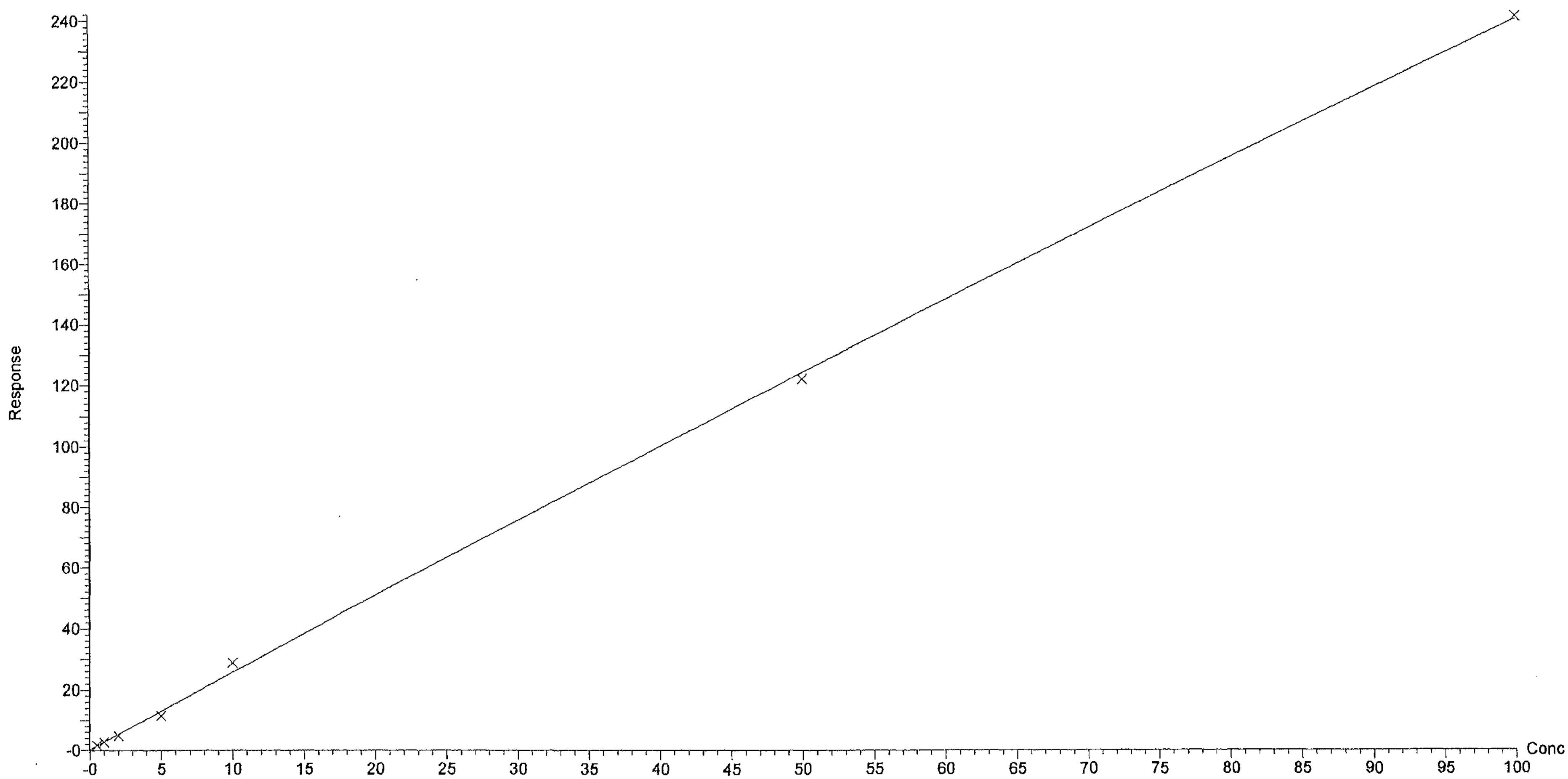


Quantify Calibration Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:20:34 Pacific Standard Time

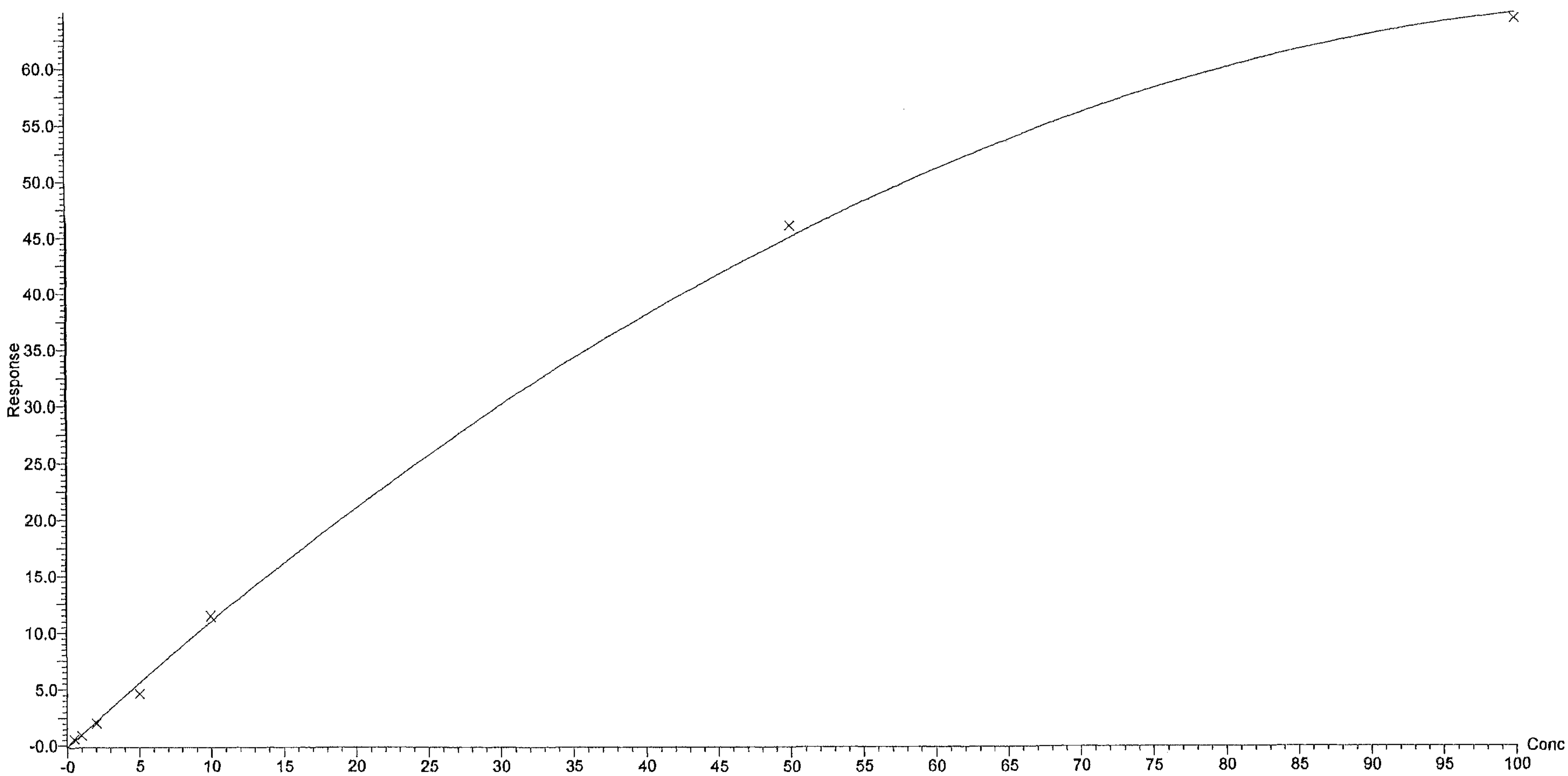
Compound name: PFHxS
Coefficient of Determination: R^2 = 0.998162
Calibration curve: -0.00151451 * x^2 + 2.56168 * x + 0.194677
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:20:34 Pacific Standard Time

Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.997079
Calibration curve: -0.00508679 * x^2 + 1.1595 * x + -0.158114
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

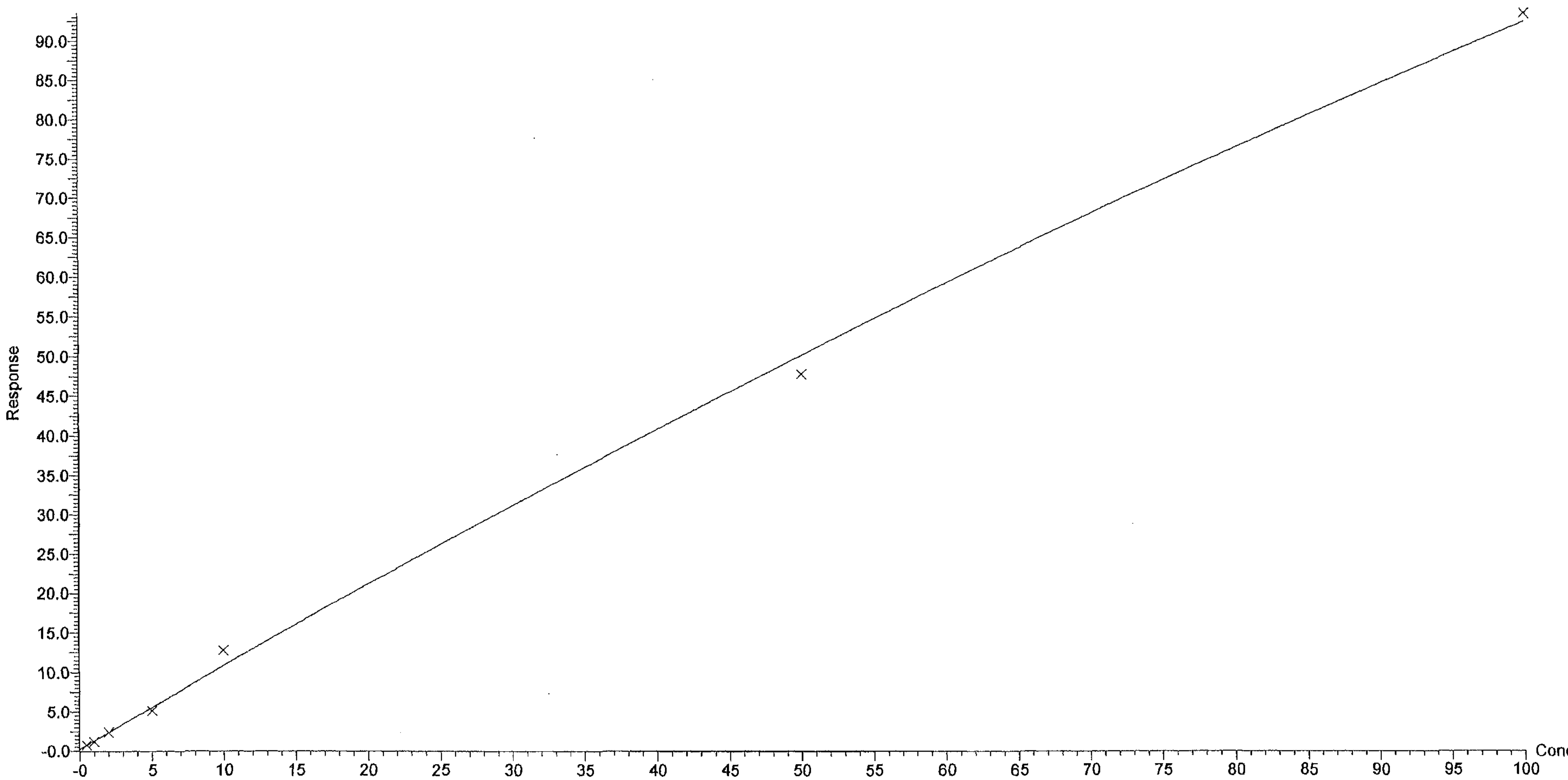


Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:20:34 Pacific Standard Time

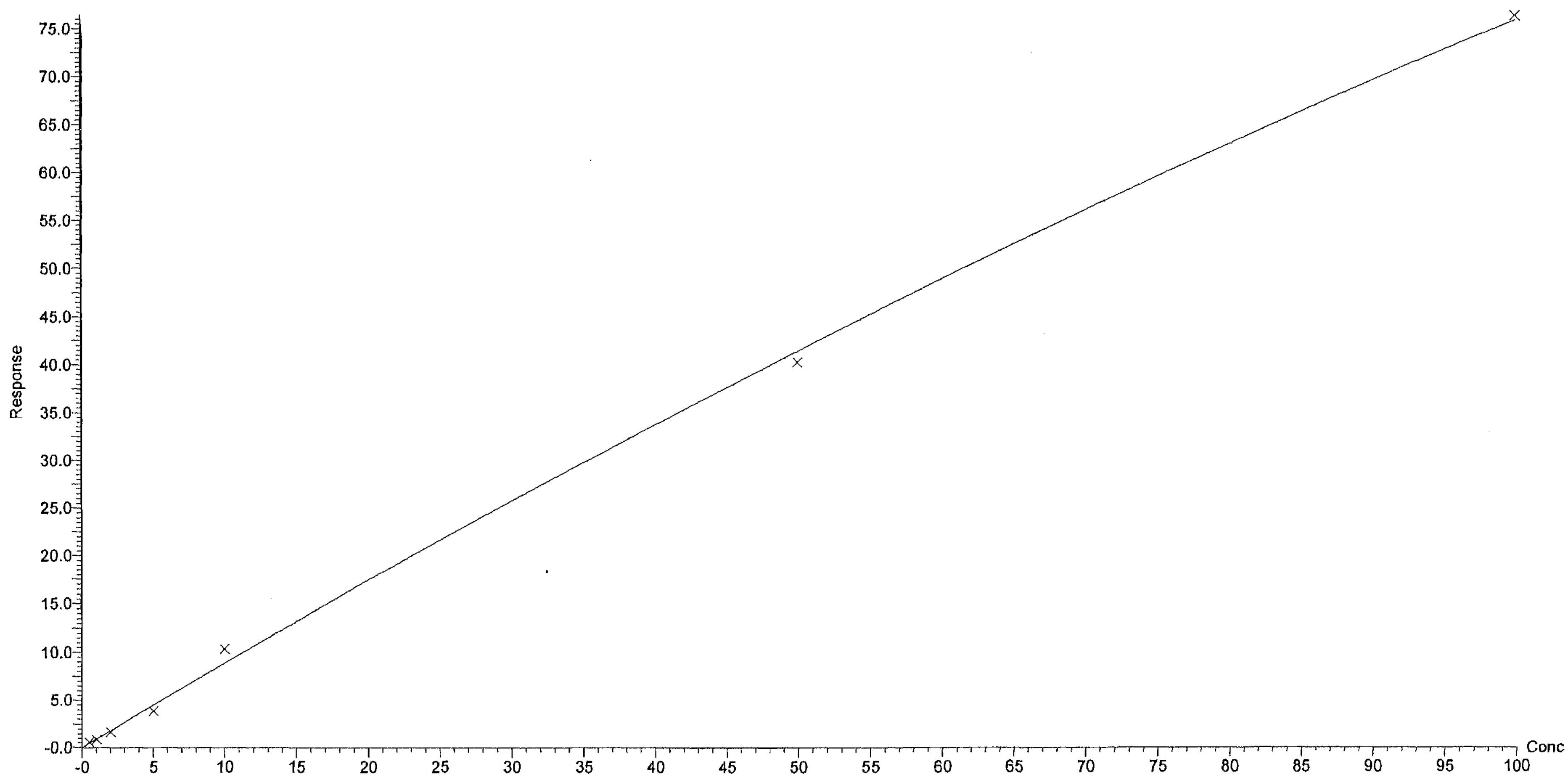
Compound name: PFOA
Coefficient of Determination: R^2 = 0.996296
Calibration curve: -0.00155481 * x^2 + 1.07791 * x + 0.205369
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:20:34 Pacific Standard Time

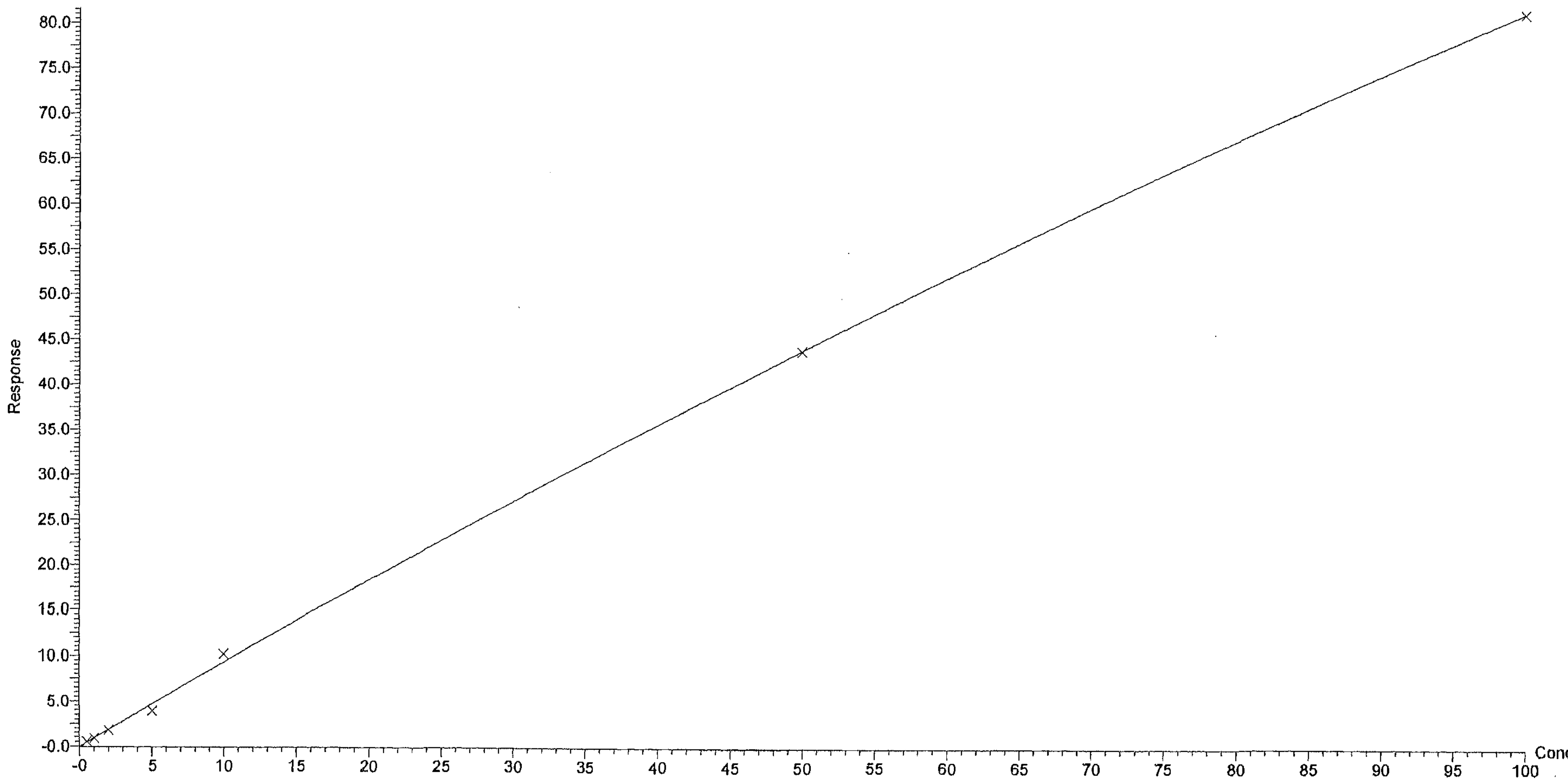
Compound name: PFNA
Coefficient of Determination: R^2 = 0.996292
Calibration curve: -0.00139326 * x^2 + 0.898917 * x + 0.000791248
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:20:34 Pacific Standard Time

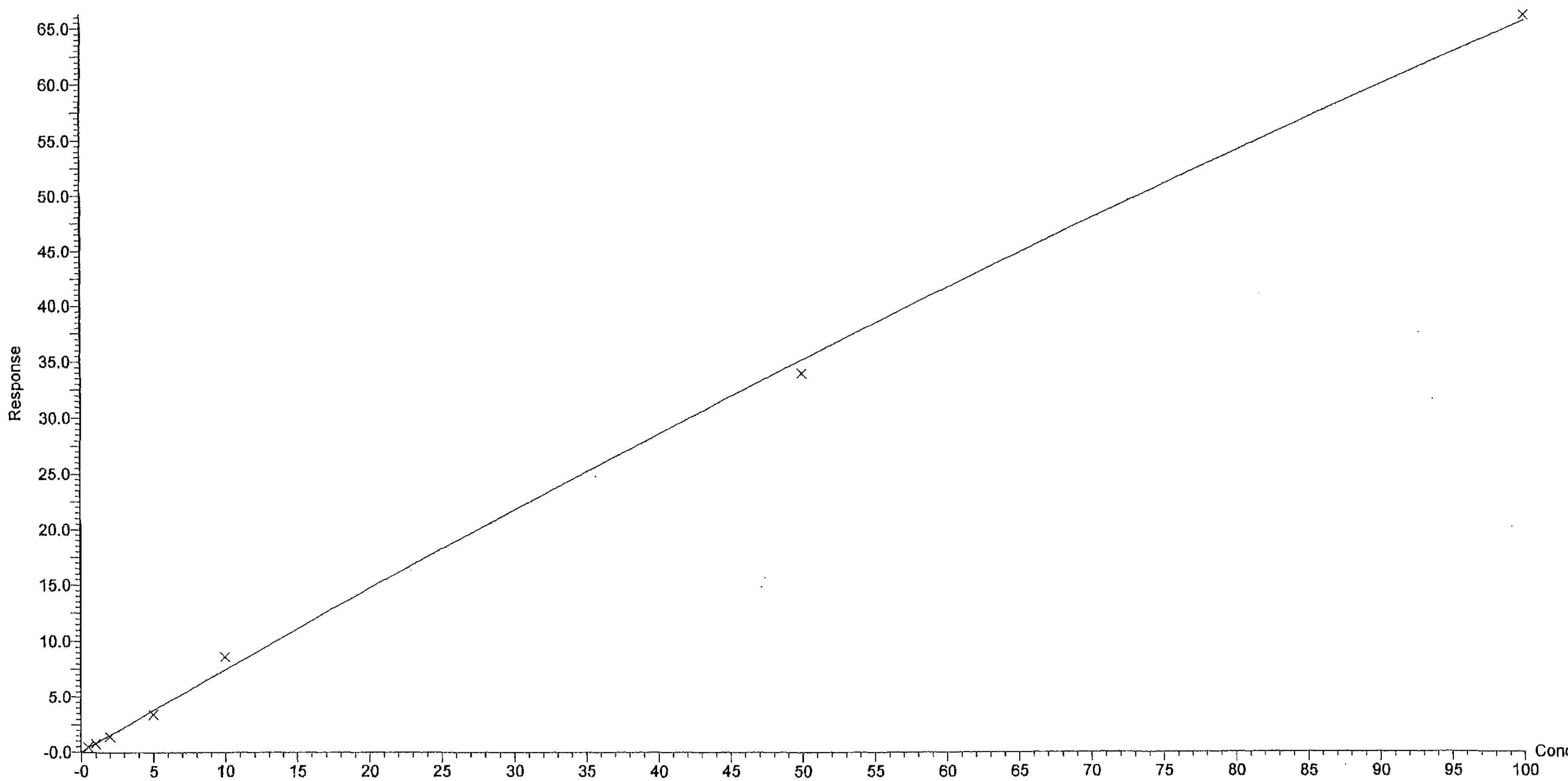
Compound name: PFOS
Coefficient of Determination: R^2 = 0.998110
Calibration curve: -0.00129642 * x^2 + 0.945877 * x + -0.0354924
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:20:34 Pacific Standard Time

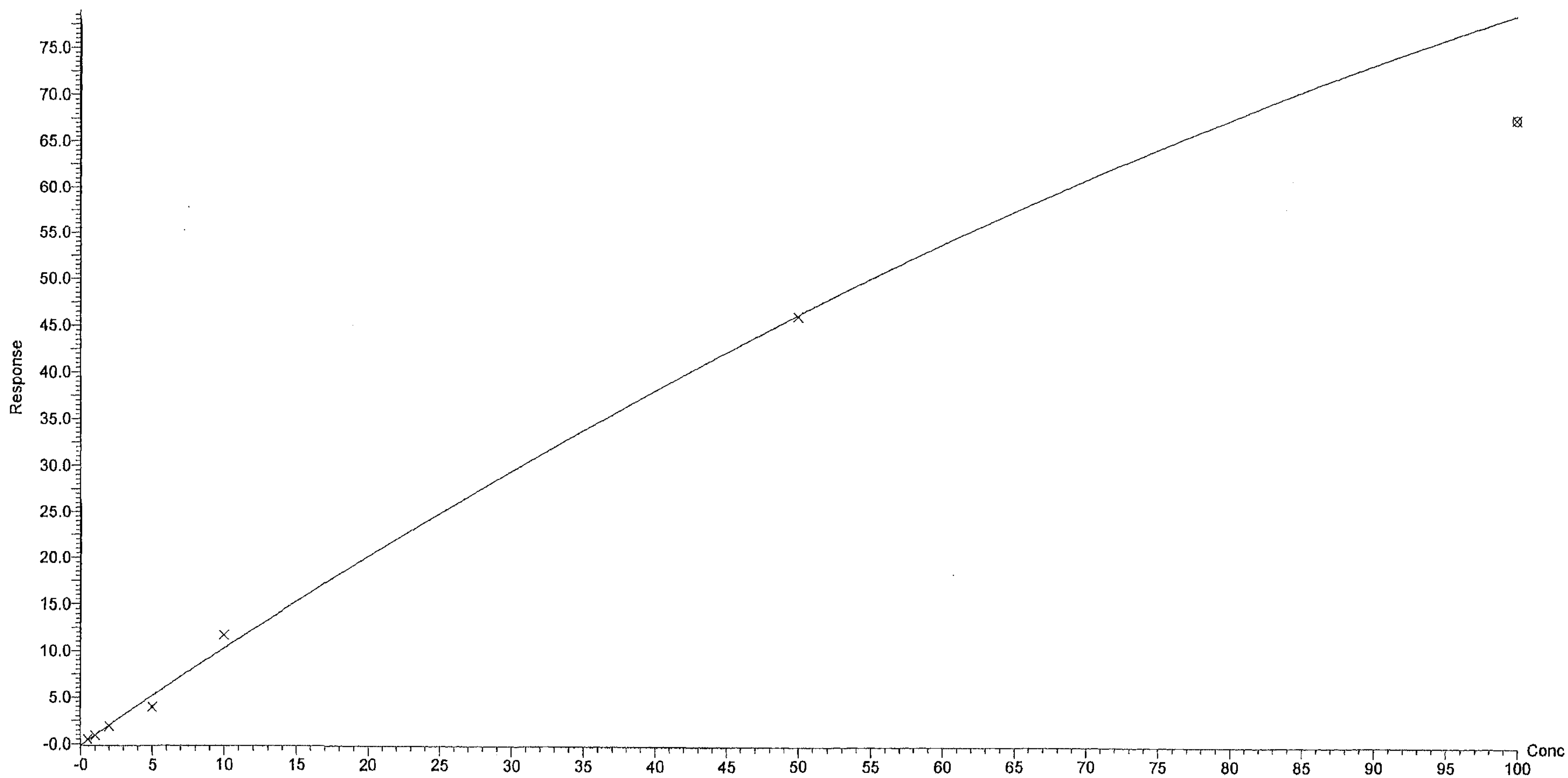
Compound name: PFDA
Coefficient of Determination: R^2 = 0.997124
Calibration curve: -0.000931657 * x^2 + 0.750947 * x + 0.0271229
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:20:34 Pacific Standard Time

Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.990620
Calibration curve: -0.00280201 * x^2 + 1.07057 * x + -0.12583
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q2

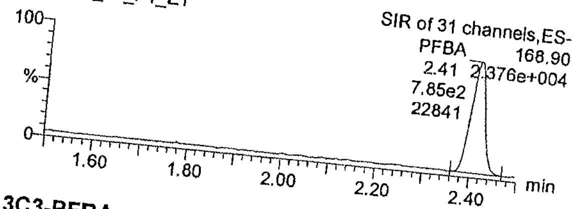
Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:22:05 Pacific Standard Time

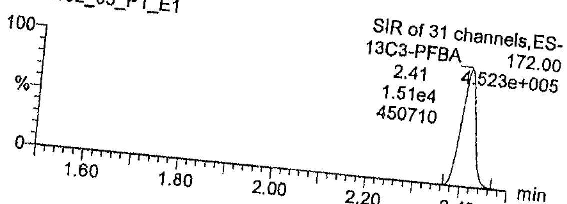
Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_Mixed.mdb 20 Dec 2016 09:25:21
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

Name: 161219J2_03.wiff, Date: 19-Dec-2016, Time: 15:20:04, ID: ST161219J2-2 PFC CS(-1) 16L1413 A, Description: PFC CS(-1) 16L1413 A

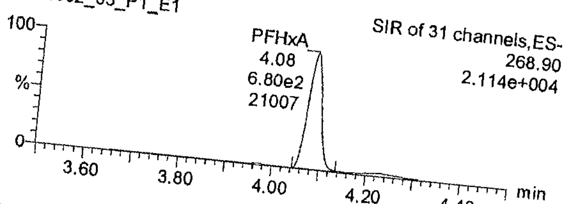
PFBA
161219J2_03_P1_E1



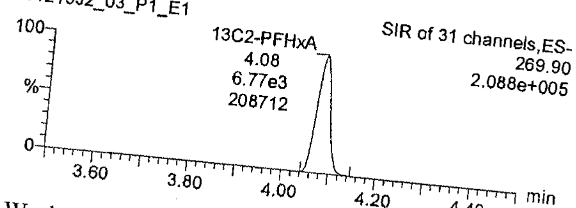
13C3-PFBA
161219J2_03_P1_E1



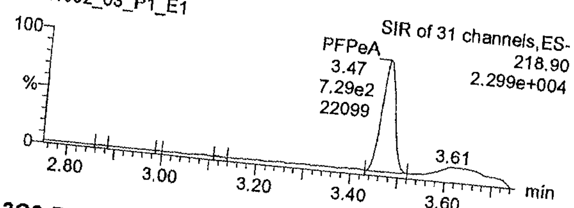
PFHxA
161219J2_03_P1_E1



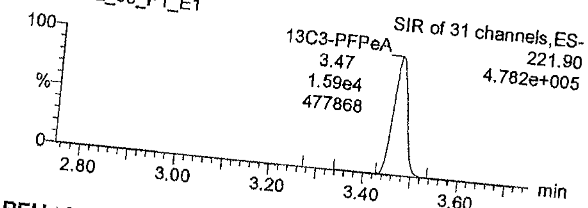
13C2-PFHxA
161219J2_03_P1_E1



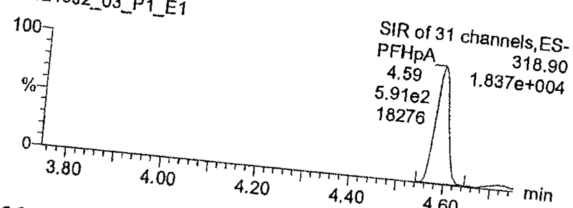
PFPeA
161219J2_03_P1_E1



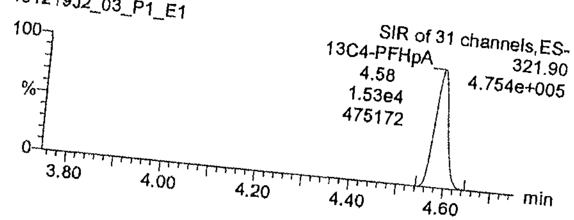
13C3-PFPeA
161219J2_03_P1_E1



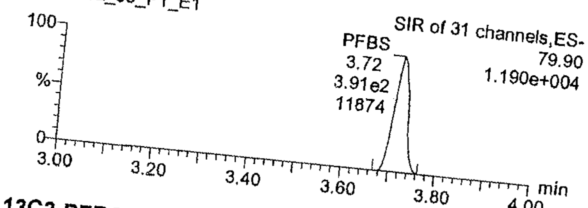
PFHpA
161219J2_03_P1_E1



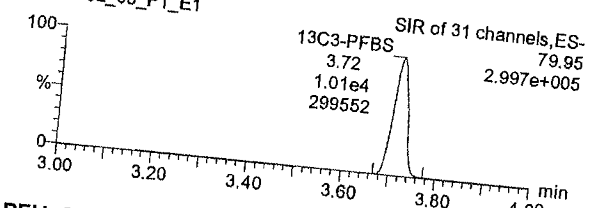
13C4-PFHpA
161219J2_03_P1_E1



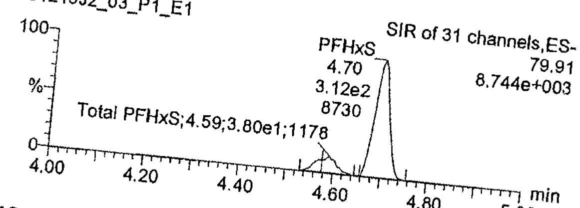
PFBS
161219J2_03_P1_E1



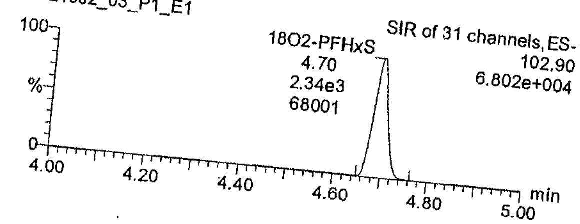
13C3-PFBS
161219J2_03_P1_E1



PFHxS
161219J2_03_P1_E1



18O2-PFHxS
161219J2_03_P1_E1



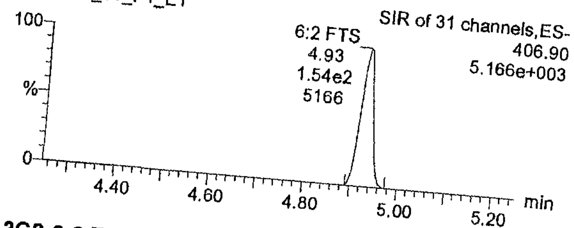
Work Order 1601554

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

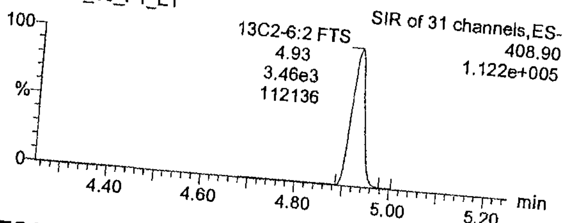
Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:22:05 Pacific Standard Time

Name: 161219J2_03.wiff, Date: 19-Dec-2016, Time: 15:20:04, ID: ST161219J2-2 PFC CS(-1) 16L1413 A, Description: PFC CS(-1) 16L1413 A

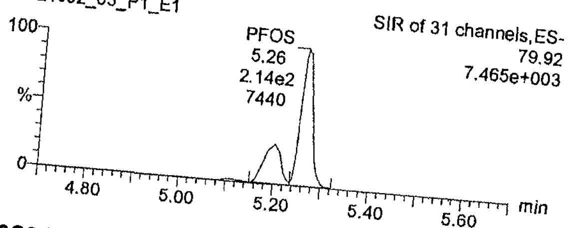
6:2 FTS
161219J2_03_P1_E1



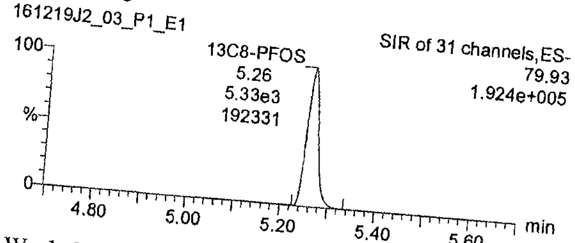
13C2-6:2 FTS
161219J2_03_P1_E1



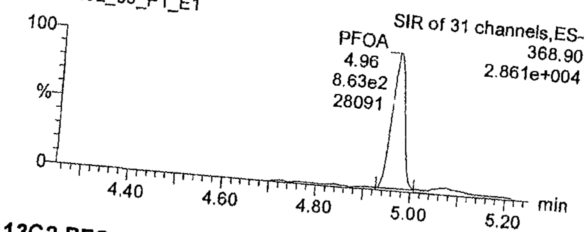
PFOS
161219J2_03_P1_E1



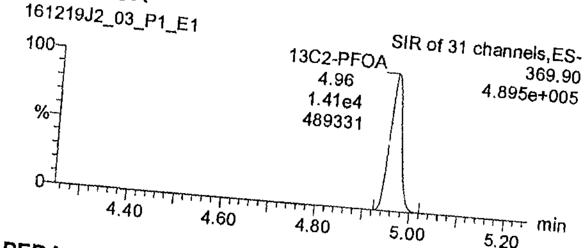
13C8-PFOS
161219J2_03_P1_E1



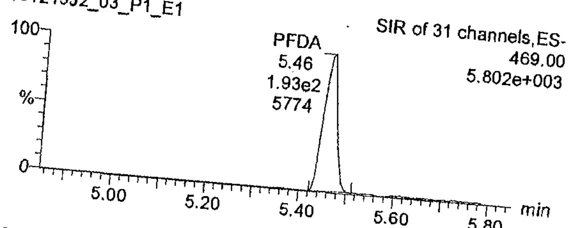
PFOA
161219J2_03_P1_E1



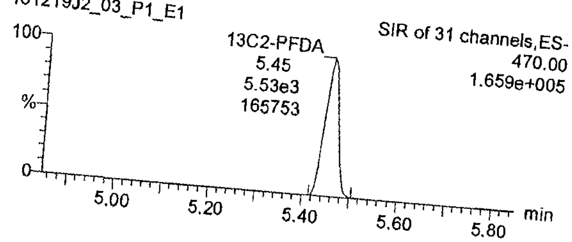
13C2-PFOA
161219J2_03_P1_E1



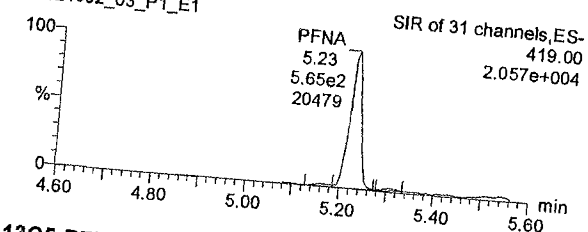
PFDA
161219J2_03_P1_E1



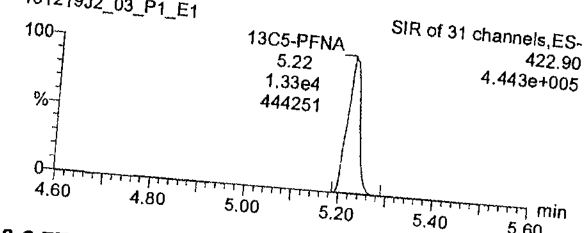
13C2-PFDA
161219J2_03_P1_E1



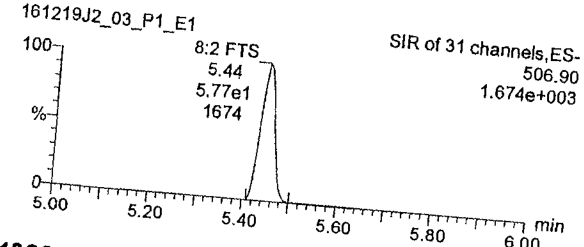
PFNA
161219J2_03_P1_E1



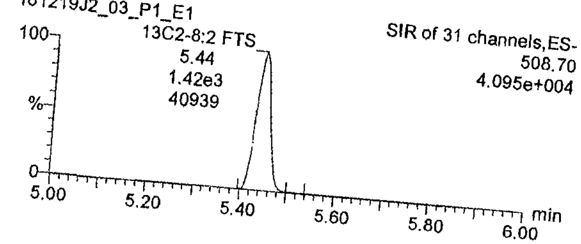
13C5-PFNA
161219J2_03_P1_E1



8:2 FTS
161219J2_03_P1_E1



13C2-8:2 FTS
161219J2_03_P1_E1



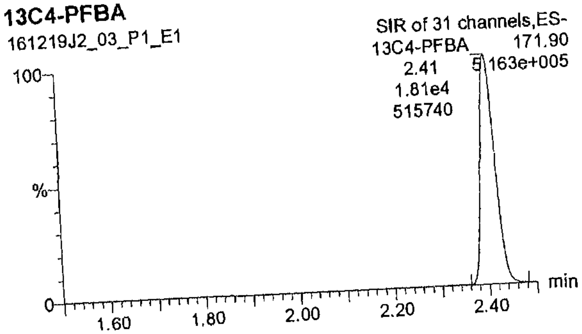
Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

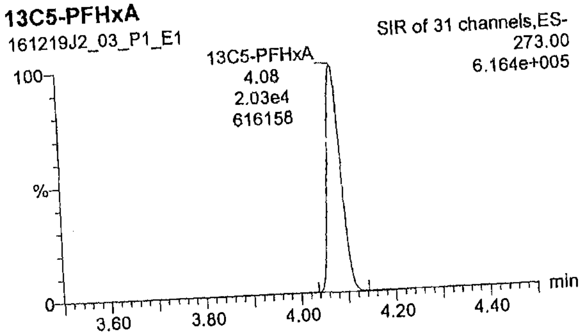
Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:22:05 Pacific Standard Time

Name: 161219J2_03.wiff, Date: 19-Dec-2016, Time: 15:20:04, ID: ST161219J2-2 PFC CS(-1) 16L1413 A, Description: PFC CS(-1) 16L1413 A

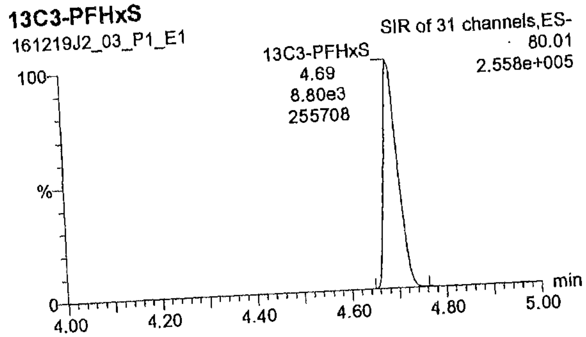
13C4-PFBA
161219J2_03_P1_E1



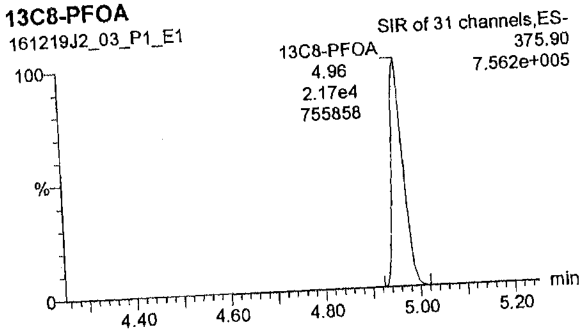
13C5-PFHxA
161219J2_03_P1_E1



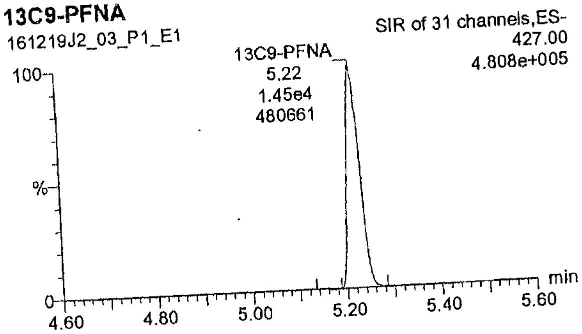
13C3-PFHxS
161219J2_03_P1_E1



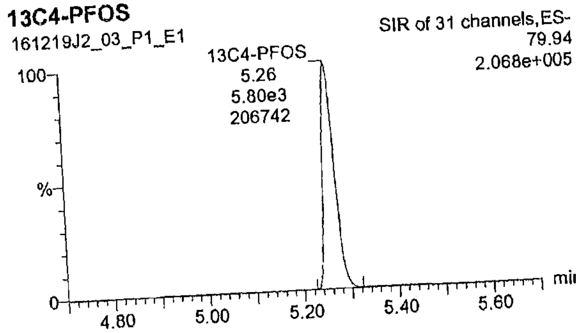
13C8-PFOA
161219J2_03_P1_E1



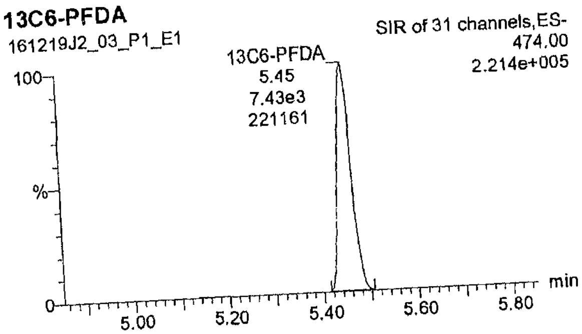
13C9-PFNA
161219J2_03_P1_E1



13C4-PFOS
161219J2_03_P1_E1



13C6-PFDA
161219J2_03_P1_E1

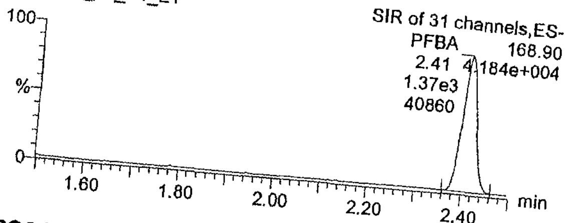


Dataset: U:\Q2.PRO\Results\161219J2\161219J2crv.qld

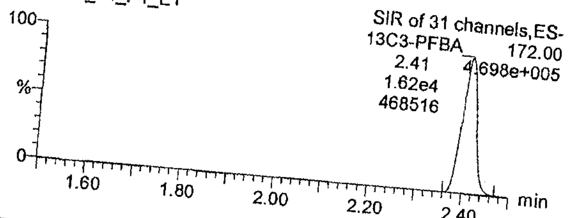
Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:22:05 Pacific Standard Time

Name: 161219J2_04.wiff, Date: 19-Dec-2016, Time: 15:32:16, ID: ST161219J2-3 PFC CS0 16L1414 A, Description: PFC CS0 16L1414 A

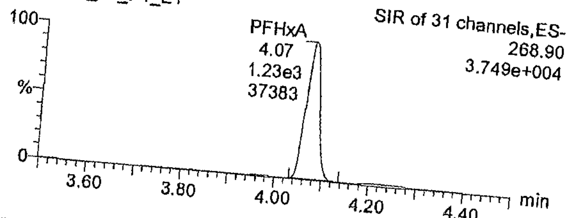
PFBA
161219J2_04_P1_E1



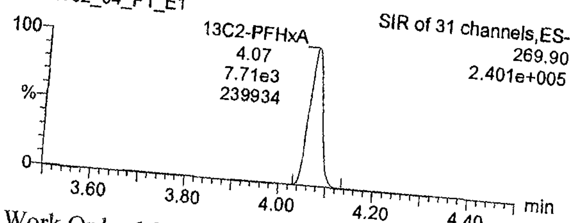
13C3-PFBA
161219J2_04_P1_E1



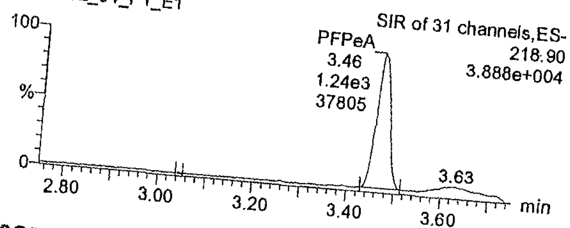
PFHxA
161219J2_04_P1_E1



13C2-PFHxA
161219J2_04_P1_E1



PFPeA
161219J2_04_P1_E1



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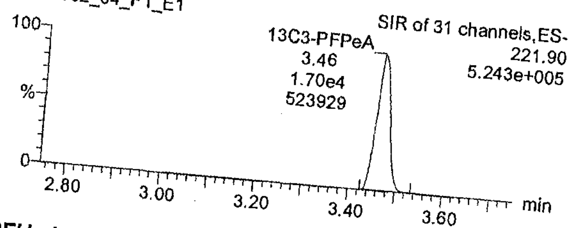

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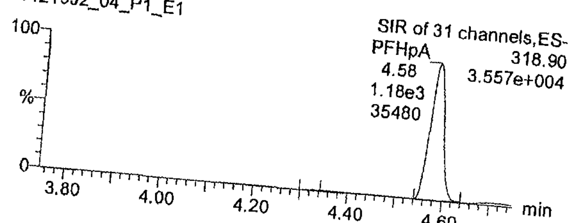
161219J2_04_P1_E1



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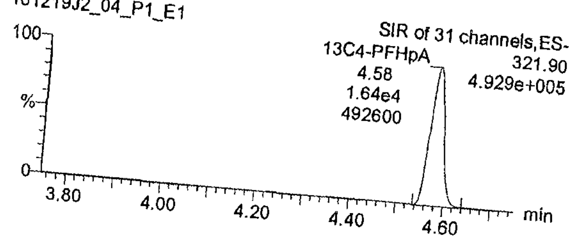
161219J2_04_P1_E1



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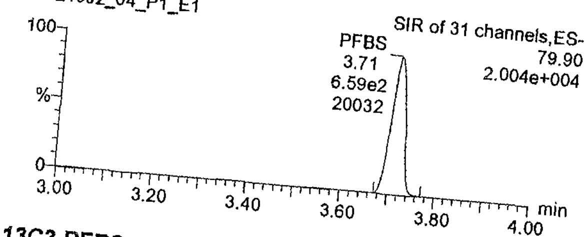

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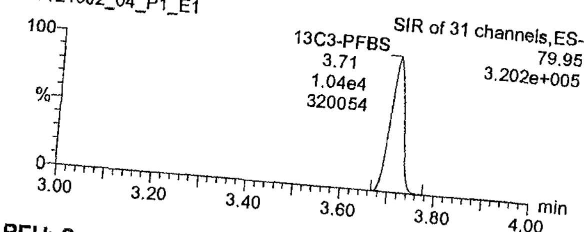
161219J2_04_P1_E1



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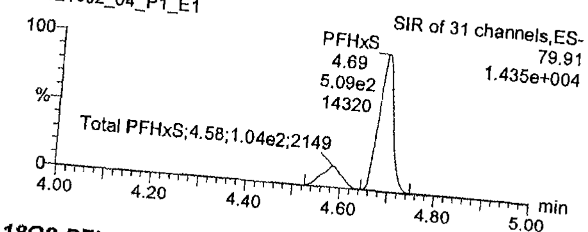
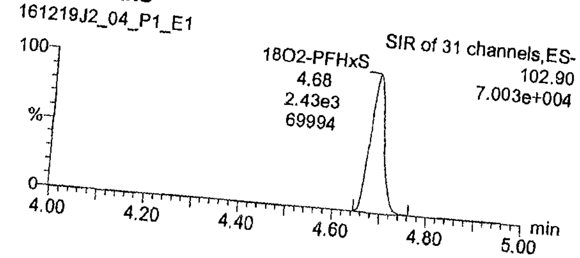


18O2-PFHxS
161219J2_04_P1_E1



Quantify Sample Report   MassLynx 4.1 SCN815
Vista Analytical Laboratory Q2

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Printed: Tuesday, December 20, 2016 10:22:05 Pacific Standard Time

Name: 161219J2_04.wiff, Date: 19-Dec-2016, Time: 15:32:16, ID: ST161219J2-3 PFC CS0 16L1414 A, Description: PFC CS0 16L1414 A

6:2 FTS
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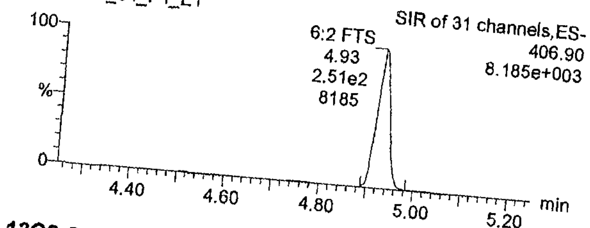
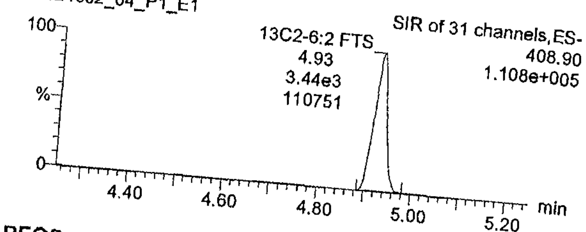
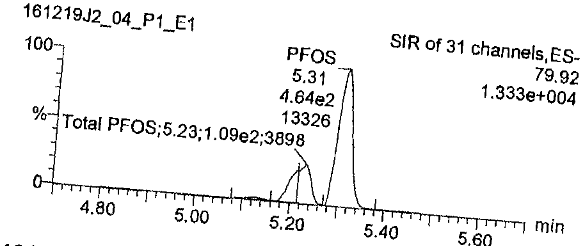


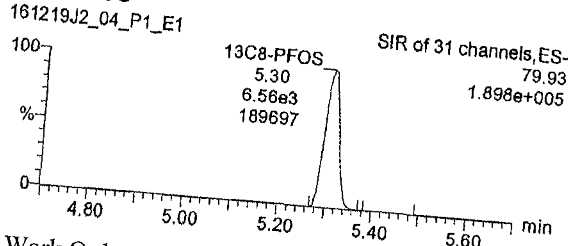
13C2-6:2 FTS
161219J2_04_P1_E1



PFOS
161219J2_04_P1_E1



13C8-PFOS
161219J2_04_P1_E1



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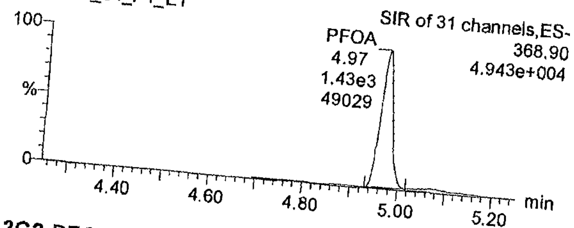
161219J2_04_P1_E1



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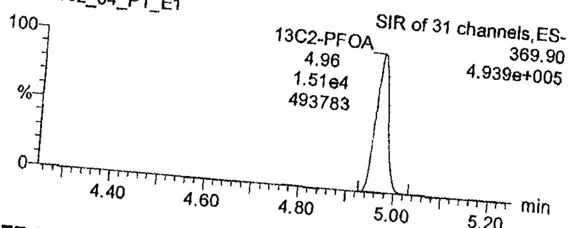

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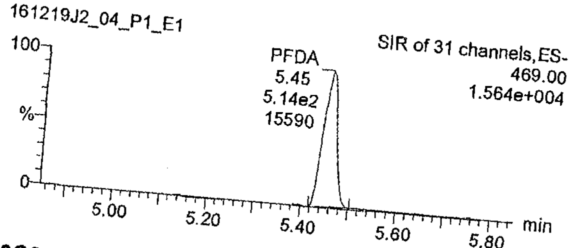
161219J2_04_P1_E1



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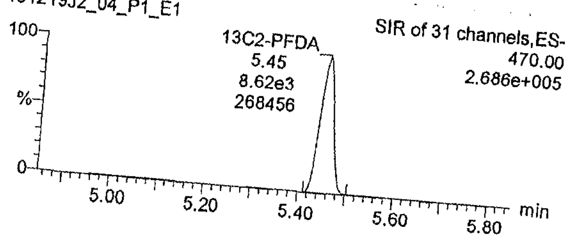

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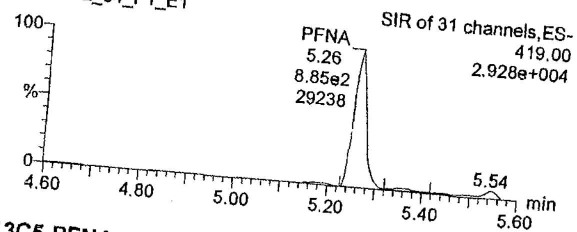
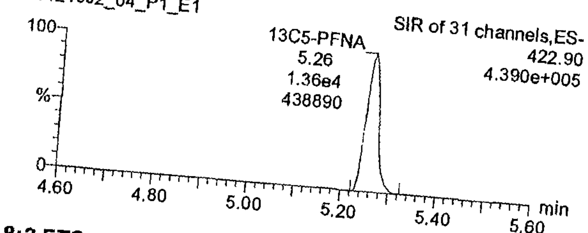
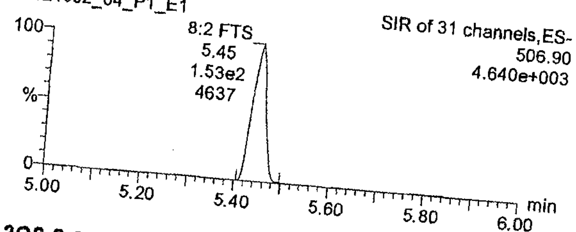
161219J2_04_P1_E1



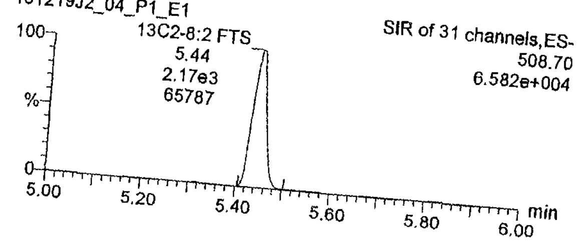
13C5-PFNA
161219J2_04_P1_E1



8:2 FTS
161219J2_04_P1_E1



13C2-8:2 FTS
161219J2_04_P1_E1



Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q2

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Printed: Tuesday, December 20, 2016 10:22:05 Pacific Standard Time

Name: 161219J2_04.wiff, Date: 19-Dec-2016, Time: 15:32:16, ID: ST161219J2-3 PFC CS0 16L1414 A, Description: PFC CS0 16L1414 A

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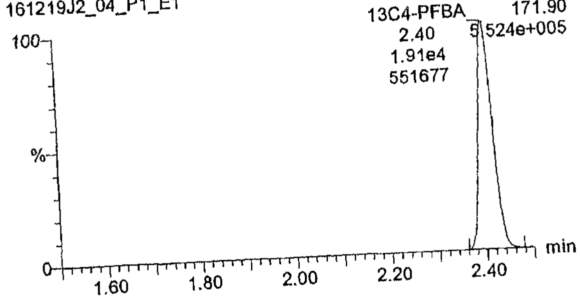
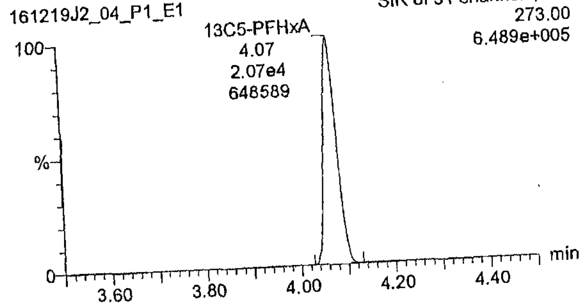


13C5-PFHxA
161219J2_04_P1_E1



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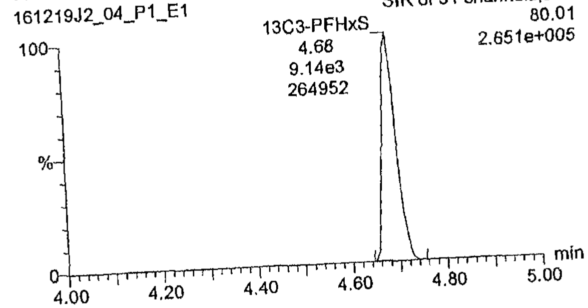

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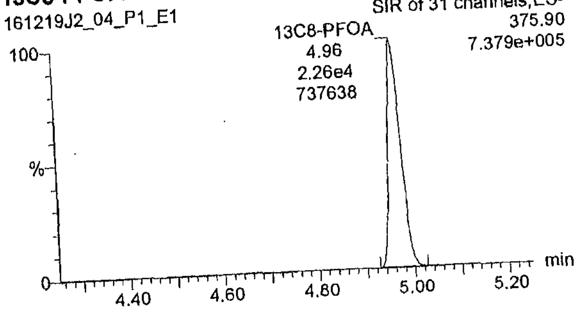
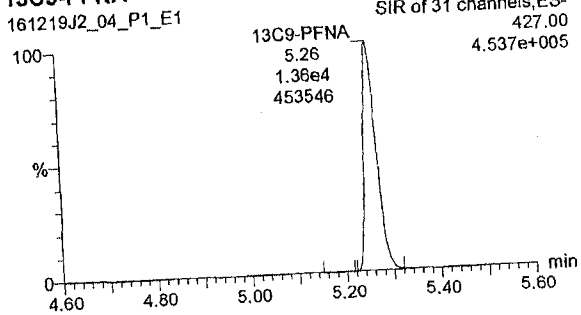
161219J2_04_P1_E1



13C9-PFNA
161219J2_04_P1_E1



13C4-PFOS
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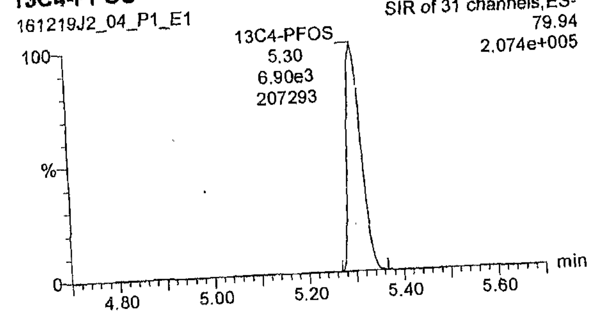
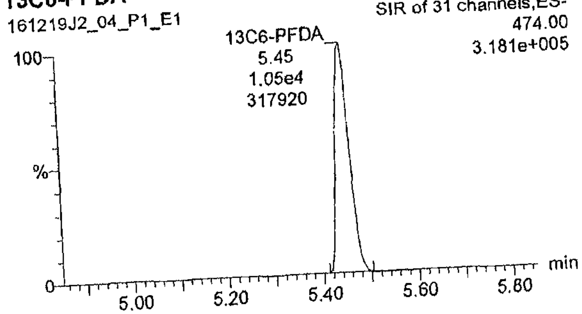


13C6-PFDA
161219J2_04_P1_E1



Name: 161219J2_05.wiff, Date: 19-Dec-2016, Time: 15:44:32, ID: ST161219J2-4 PFC CS1 16L1415 A, Description: PFC CS1 16L1415 A

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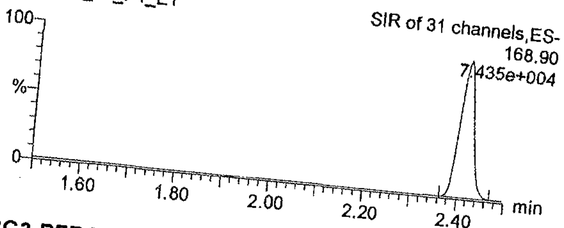
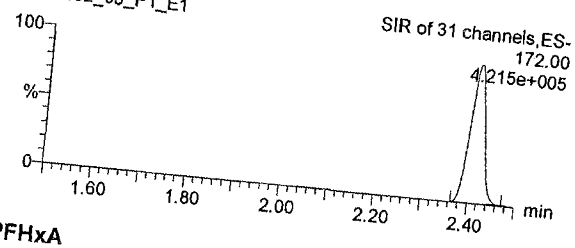


13C3-PFBA
161219J2_05_P1_E1



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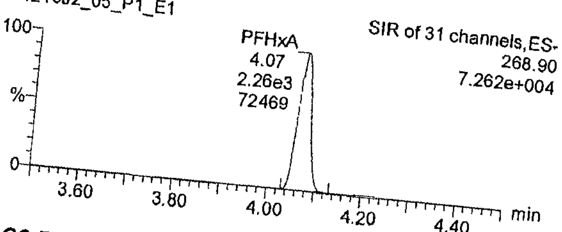

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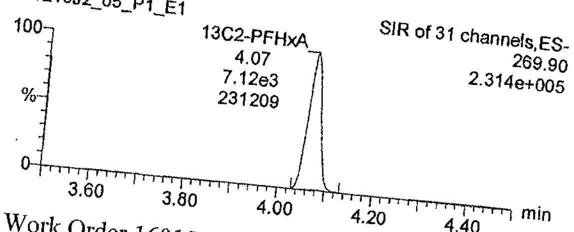

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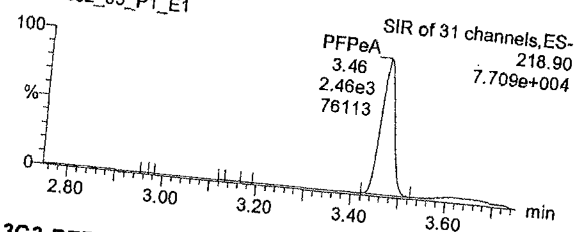
161219J2_05_P1_E1



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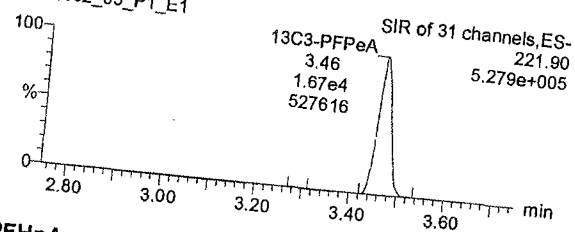
161219J2_05_P1_E1



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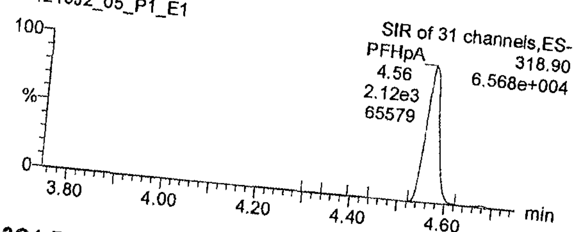
161219J2_05_P1_E1



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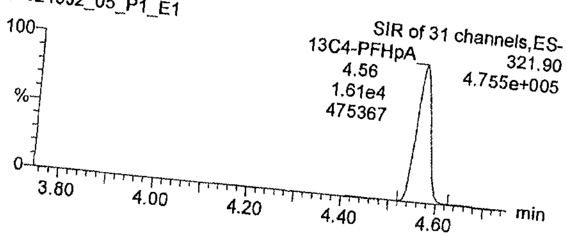
161219J2_05_P1_E1



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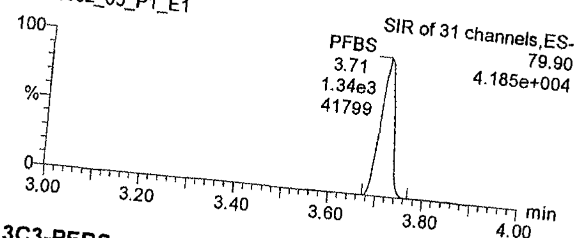
161219J2_05_P1_E1



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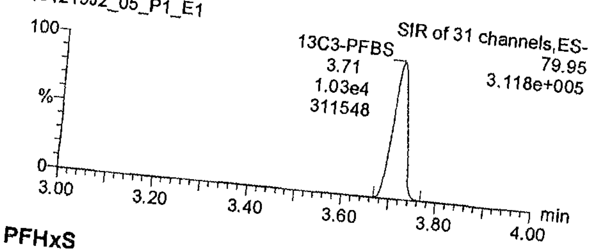

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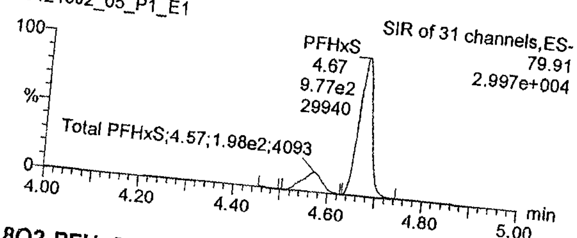

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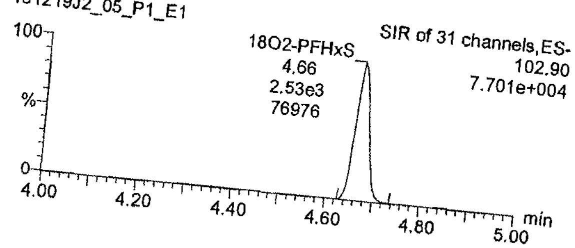

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Printed: Tuesday, December 20, 2016 10:22:05 Pacific Standard Time

Name: 161219J2_05.wiff, Date: 19-Dec-2016, Time: 15:44:32, ID: ST161219J2-4 PFC CS1 16L1415 A, Description: PFC CS1 16L1415 A

6:2 FTS
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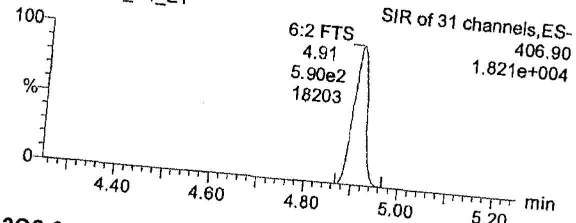

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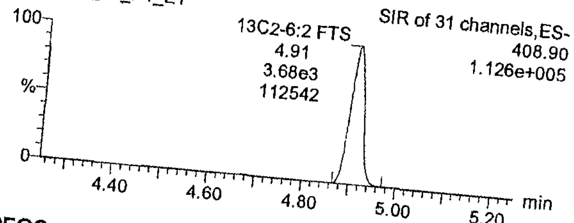
161219J2_05_P1_E1



PFOS
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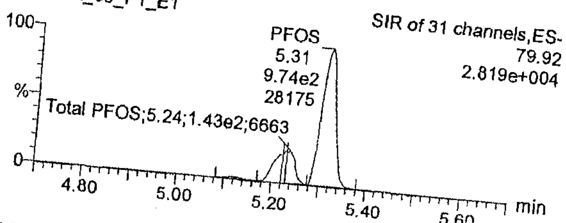
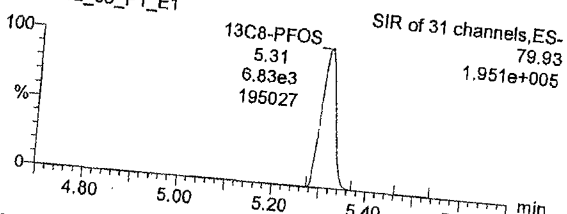
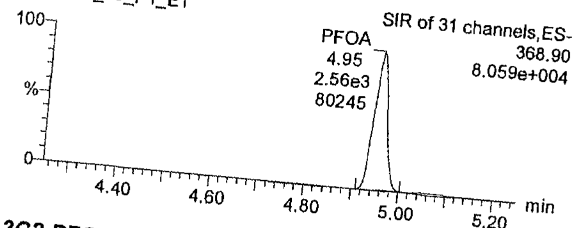


13C8-PFOS
161219J2_05_P1_E1



PFOA
161219J2_05_P1_E1



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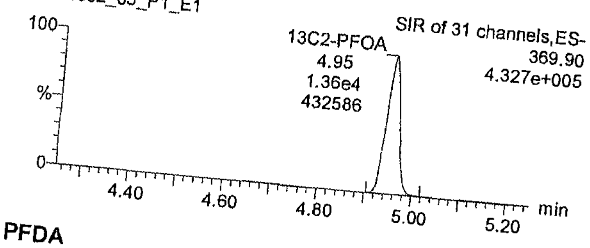

PFDA
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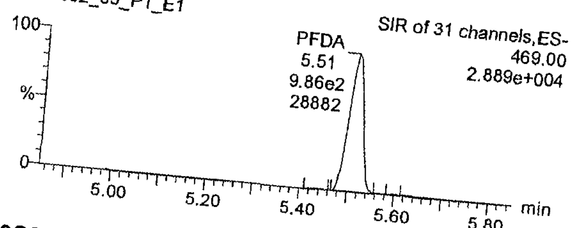

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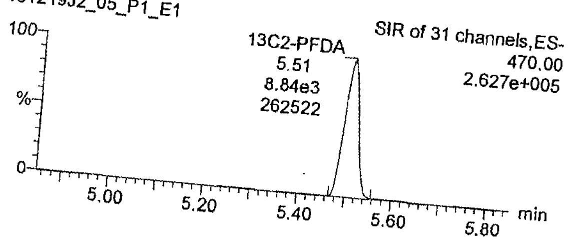

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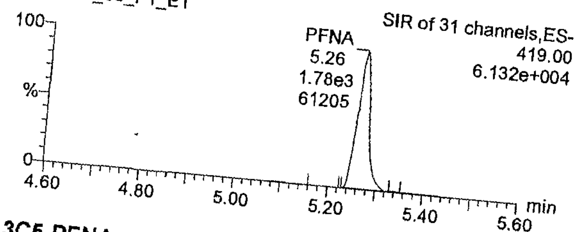

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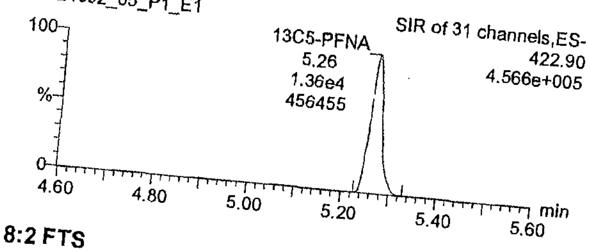
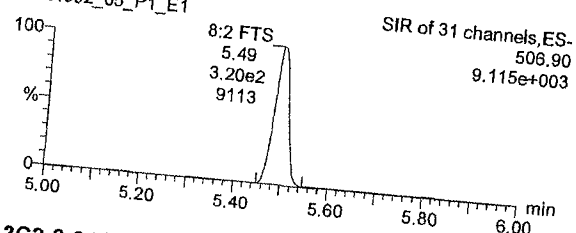
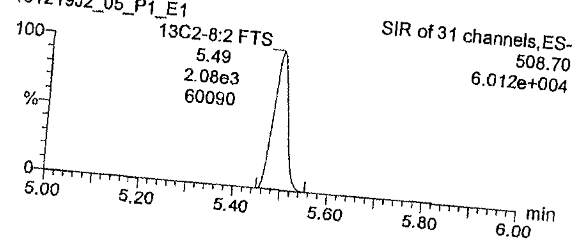
161219J2_05_P1_E1



8:2 FTS
161219J2_05_P1_E1



13C2-8:2 FTS
161219J2_05_P1_E1



Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q2

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Printed: Tuesday, December 20, 2016 10:22:05 Pacific Standard Time

Name: 161219J2_05.wiff, Date: 19-Dec-2016, Time: 15:44:32, ID: ST161219J2-4 PFC CS1 16L1415 A, Description: PFC CS1 16L1415 A

13C4-PFBA
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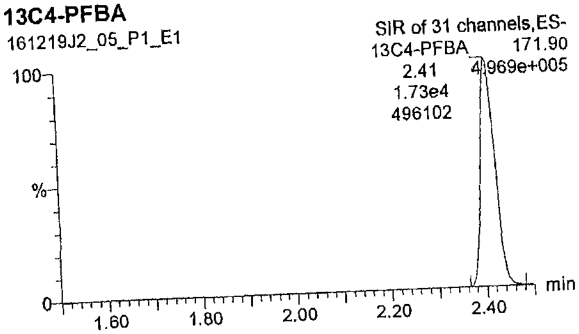
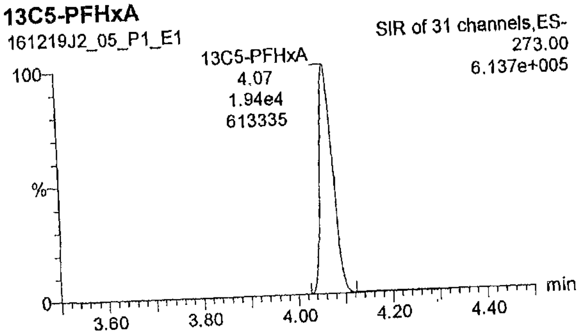


13C5-PFHxA
161219J2_05_P1_E1



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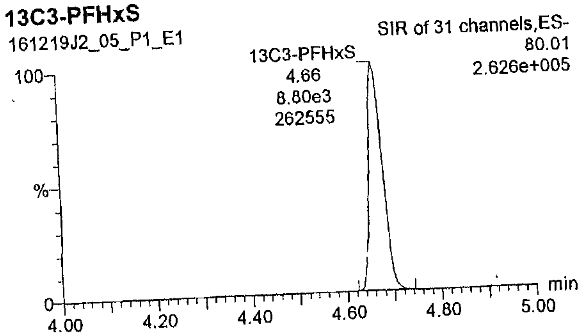

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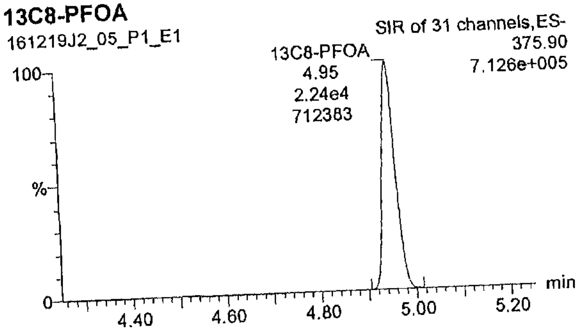
161219J2_05_P1_E1



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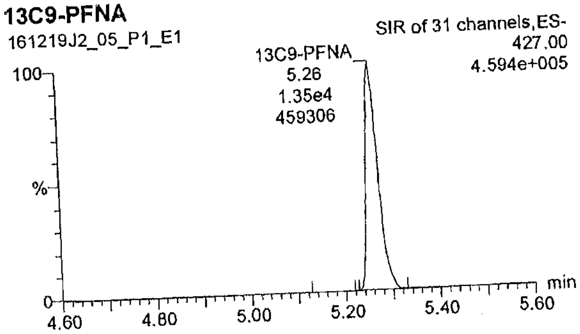

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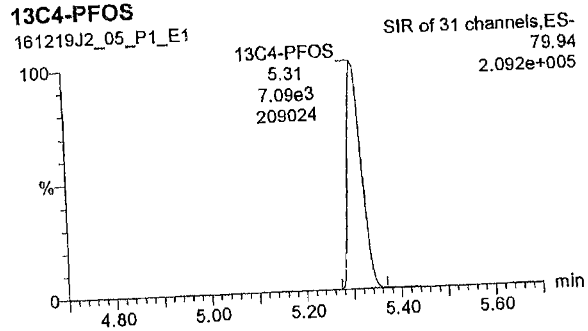

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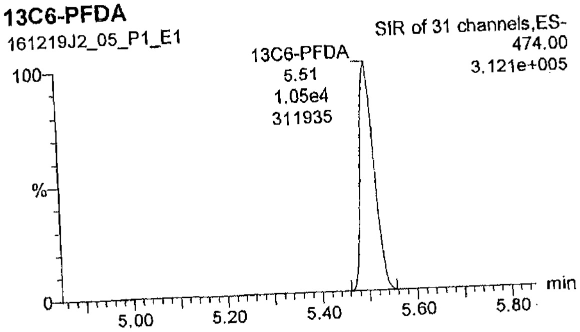

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Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:22:05 Pacific Standard Time

Name: 161219J2_06.wiff, Date: 19-Dec-2016, Time: 15:56:48, ID: ST161219J2-5 PFC CS2 16L1416 A, Description: PFC CS2 16L1416 A

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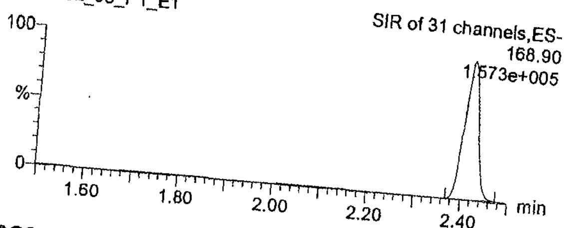

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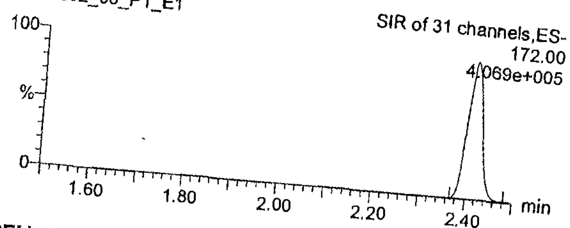

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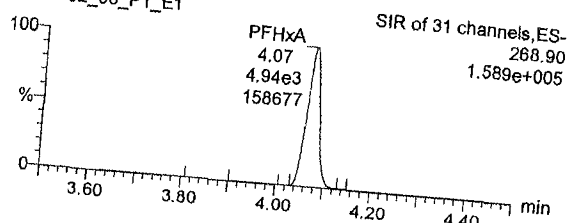

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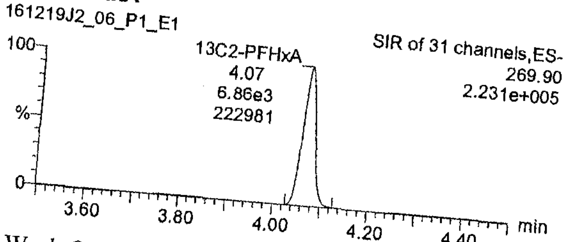

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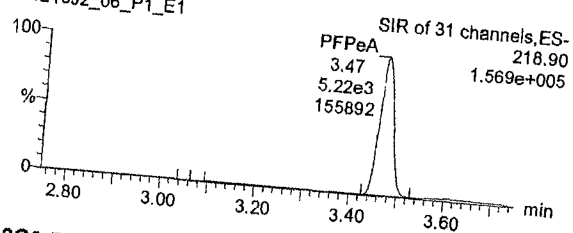

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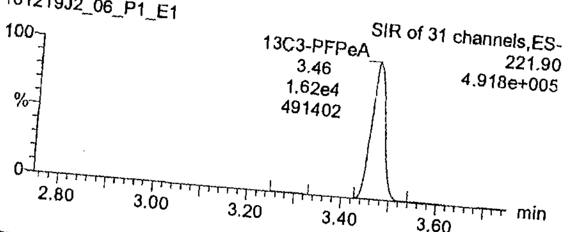

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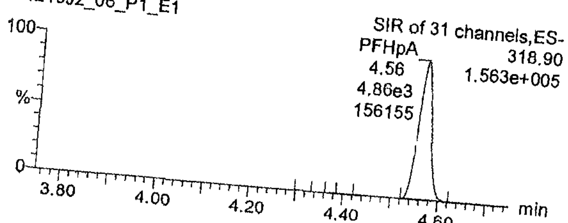

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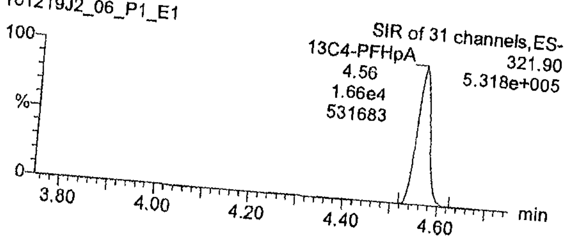

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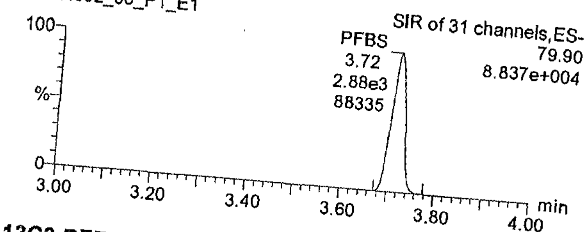

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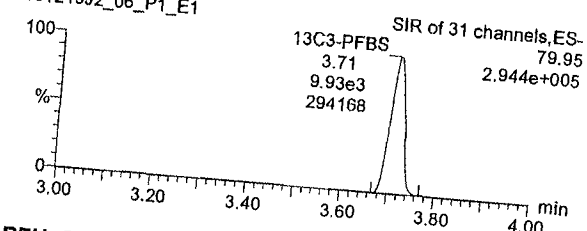

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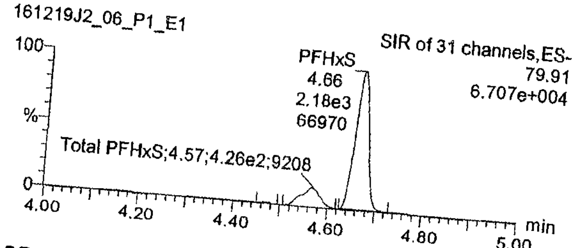

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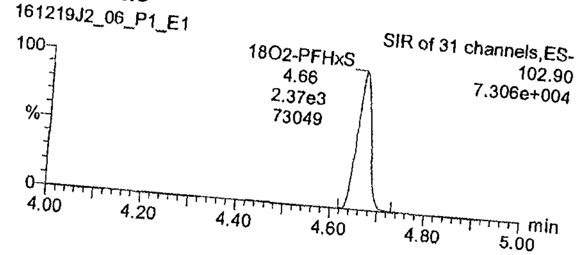

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Printed: Tuesday, December 20, 2016 10:22:05 Pacific Standard Time

Name: 161219J2_06.wiff, Date: 19-Dec-2016, Time: 15:56:48, ID: ST161219J2-5 PFC CS2 16L1416 A, Description: PFC CS2 16L1416 A

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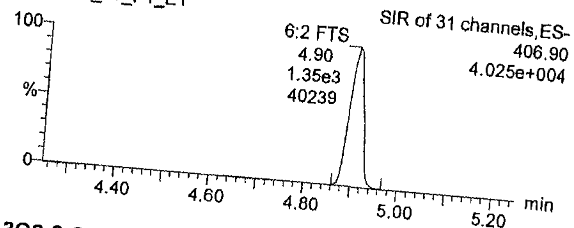

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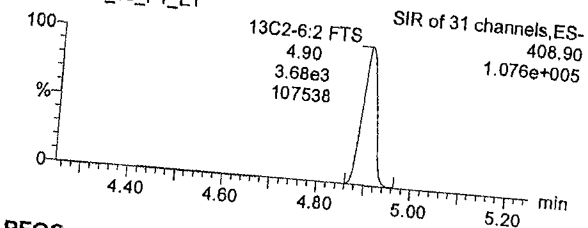
161219J2_06_P1_E1



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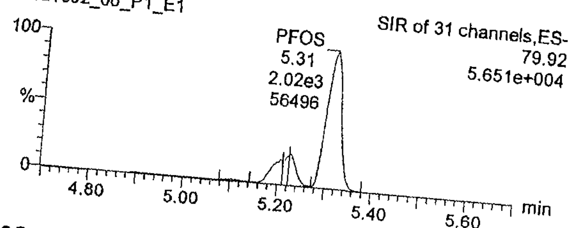

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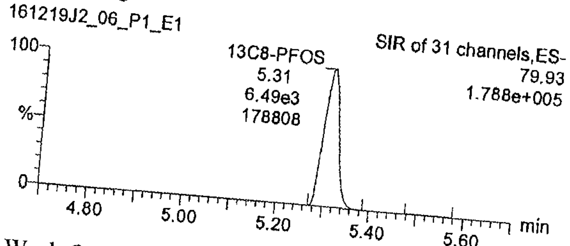

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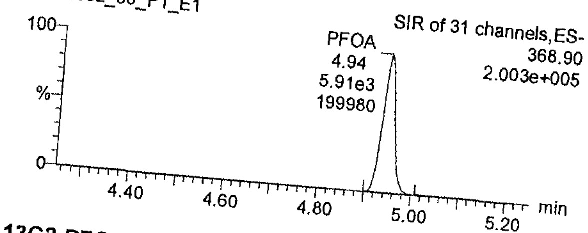

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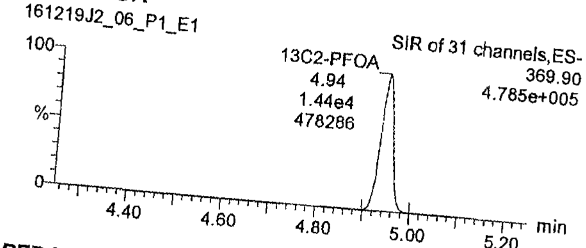

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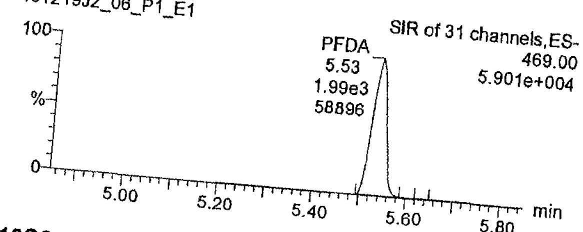

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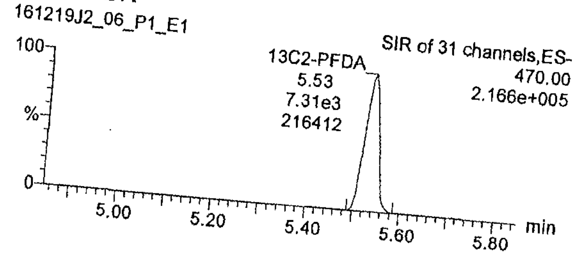

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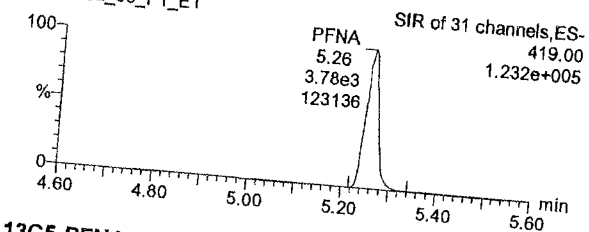

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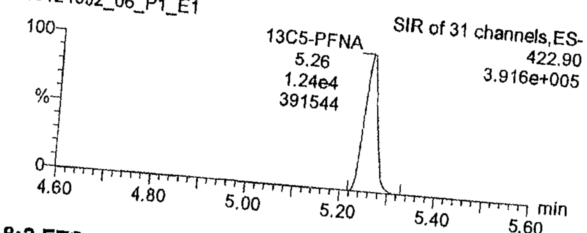
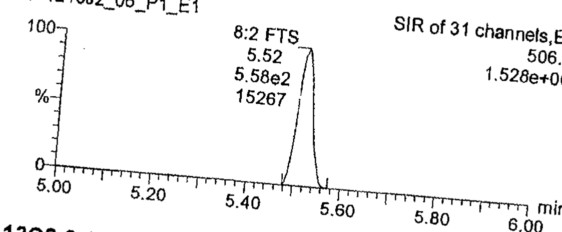


8:2 FTS
161219J2_06_P1_E1



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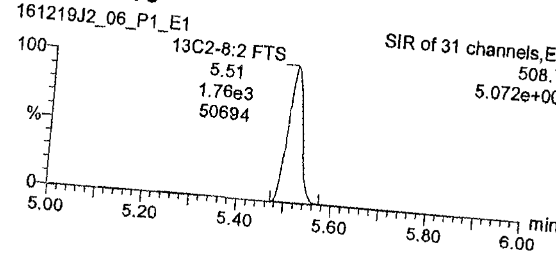

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Last Altered: Tuesday, December 20, 2016 09:50:44 Pacific Standard Time
Printed: Tuesday, December 20, 2016 10:22:05 Pacific Standard Time

Name: 161219J2_06.wiff, Date: 19-Dec-2016, Time: 15:56:48, ID: ST161219J2-5 PFC CS2 16L1416 A, Description: PFC CS2 16L1416 A

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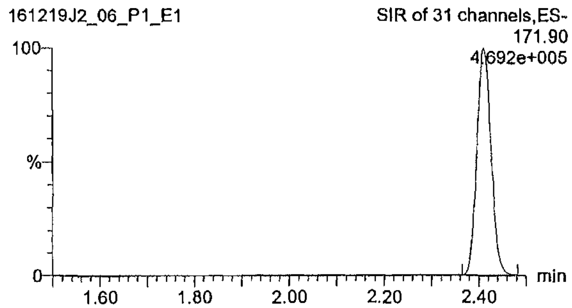

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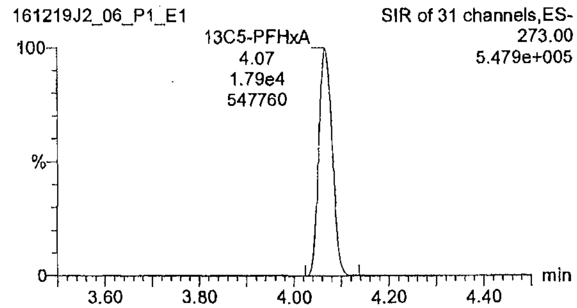

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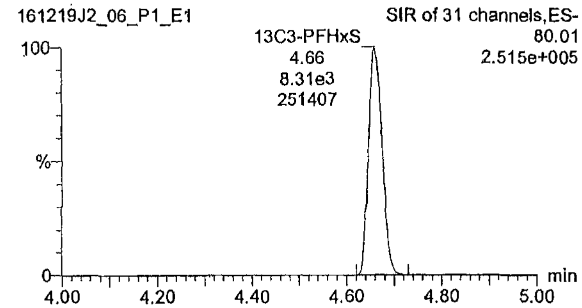

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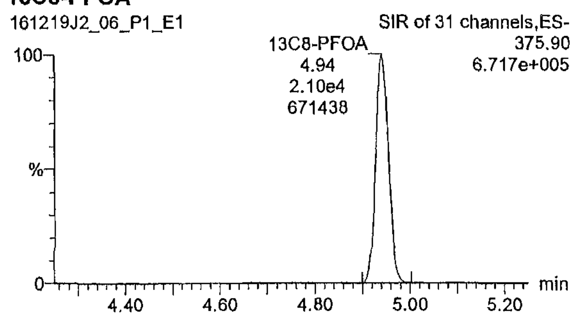

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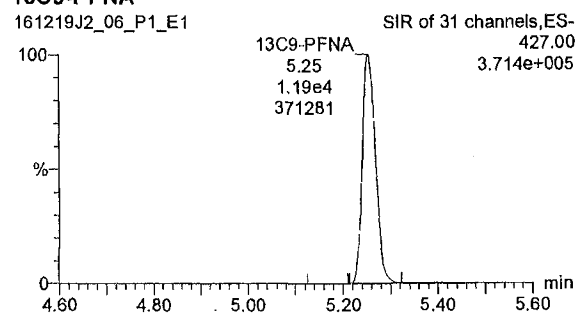

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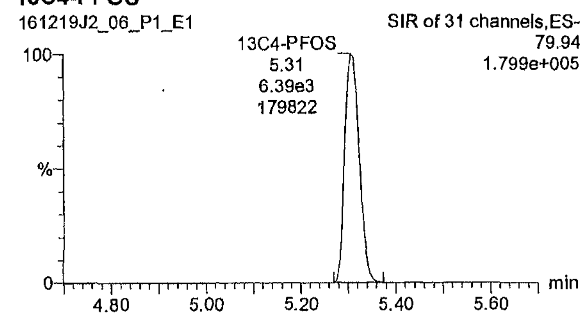

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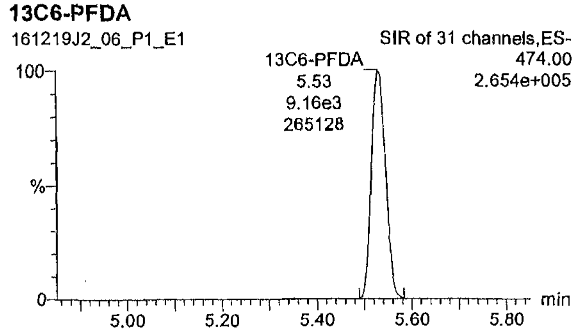

Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q2

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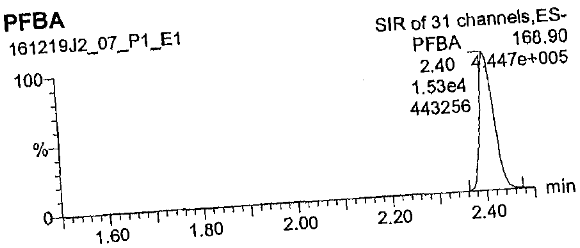

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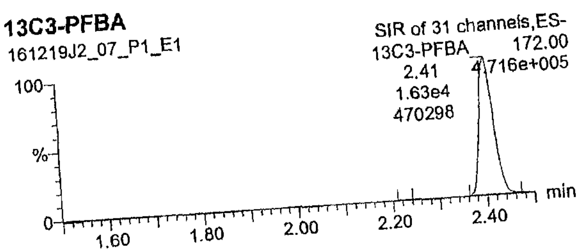

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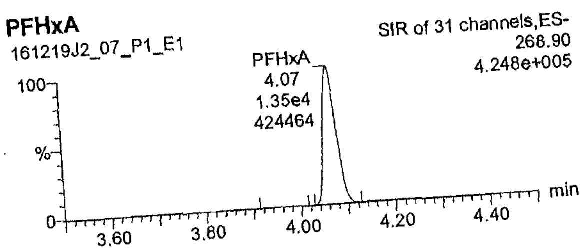

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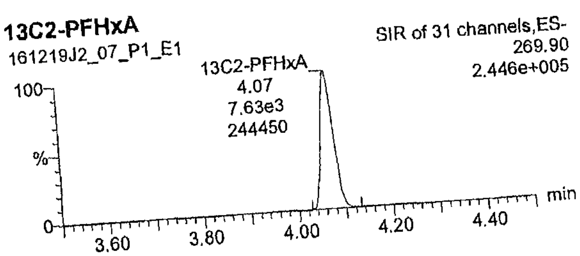

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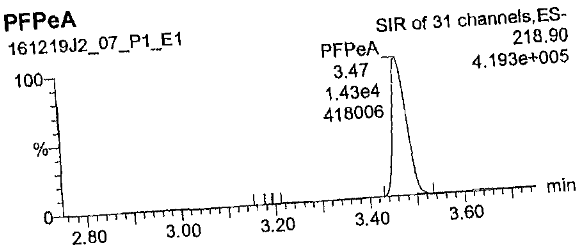

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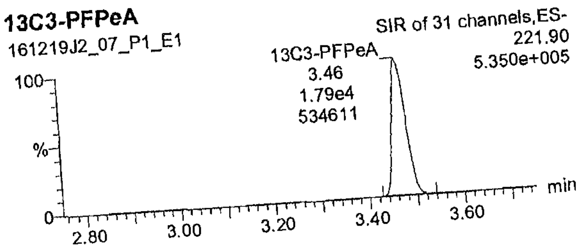

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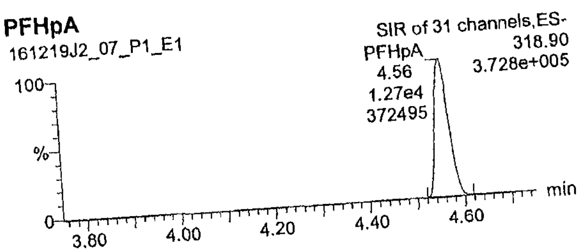

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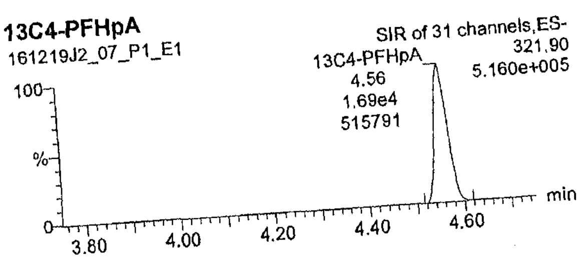

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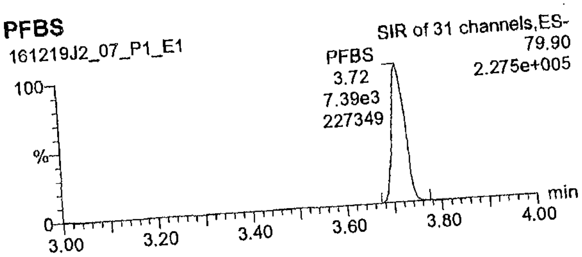

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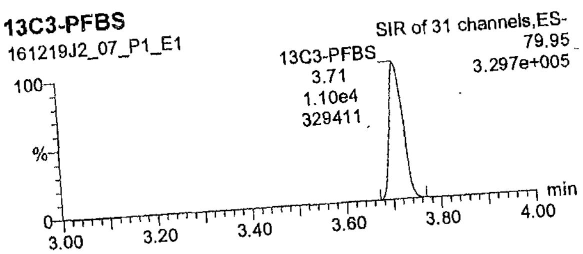

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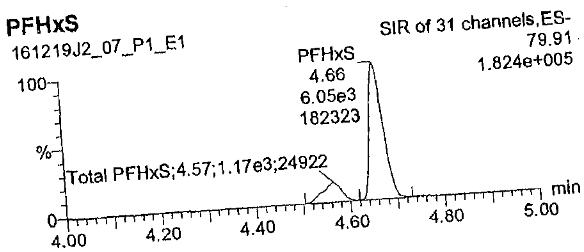

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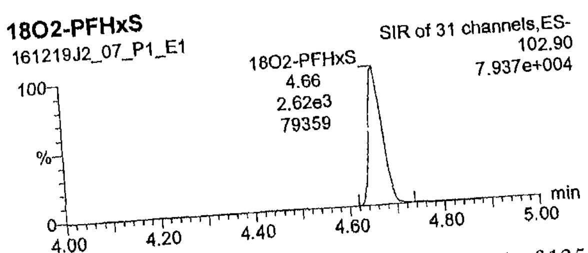

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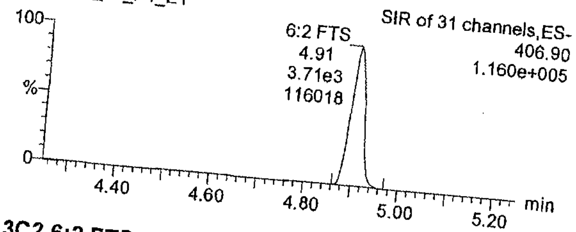

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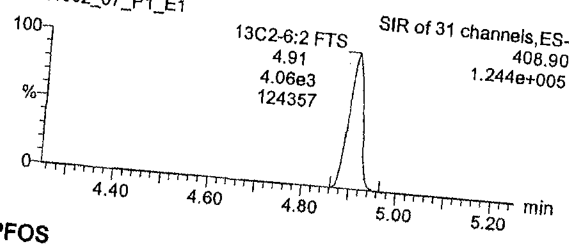

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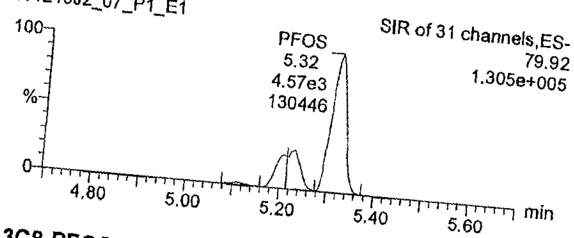

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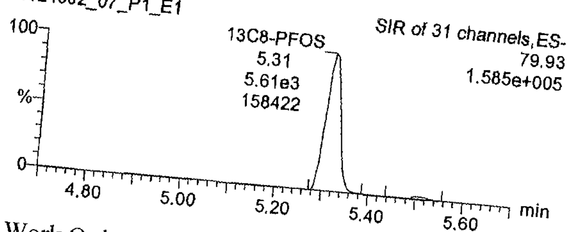

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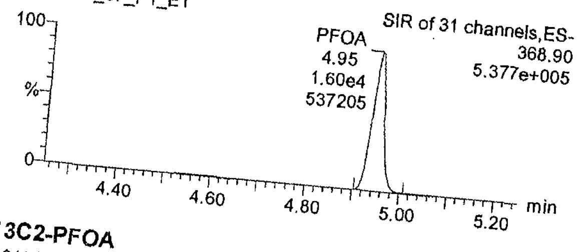

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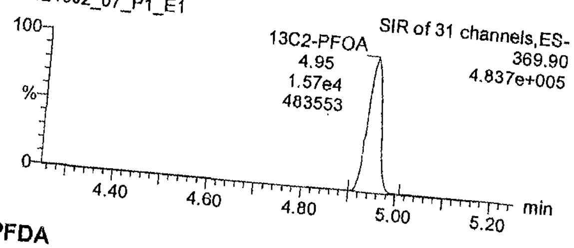

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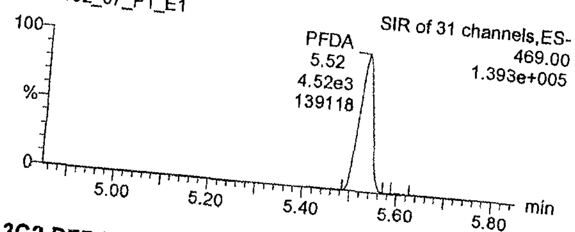

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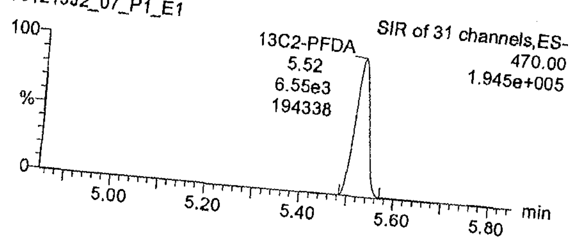

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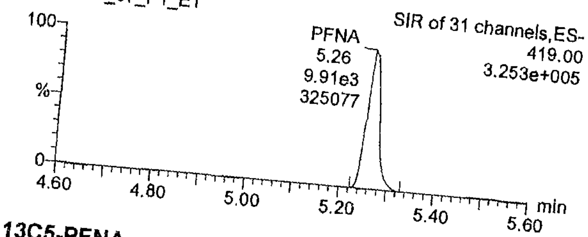

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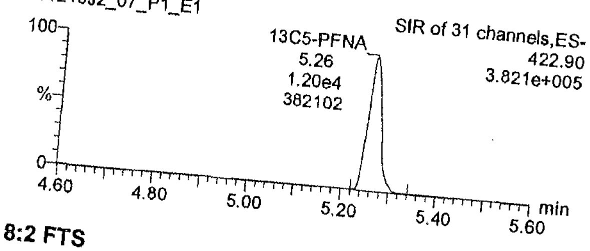

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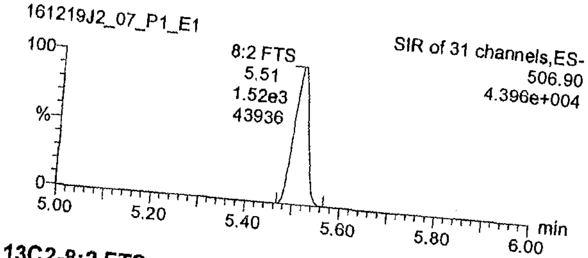

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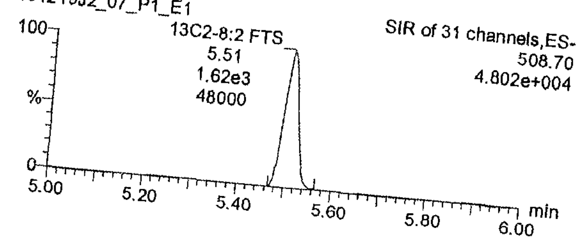

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Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q2

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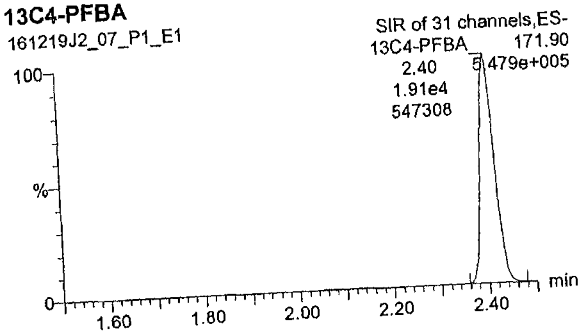

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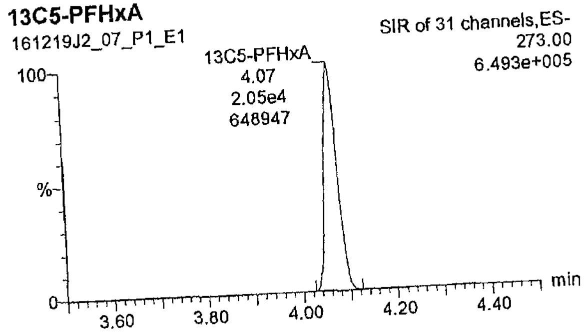

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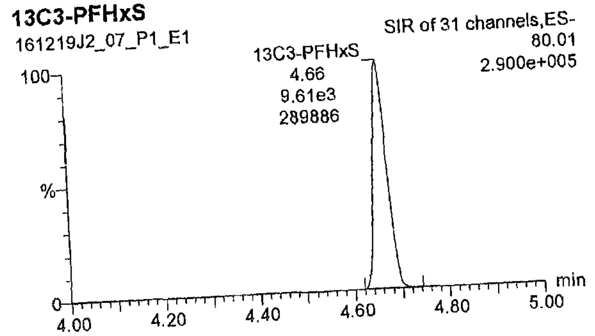

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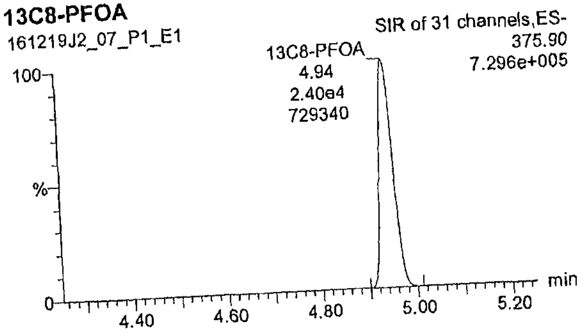

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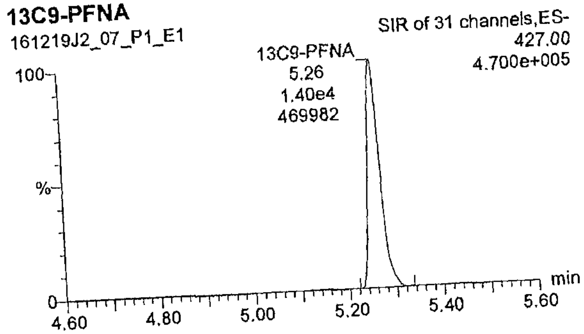

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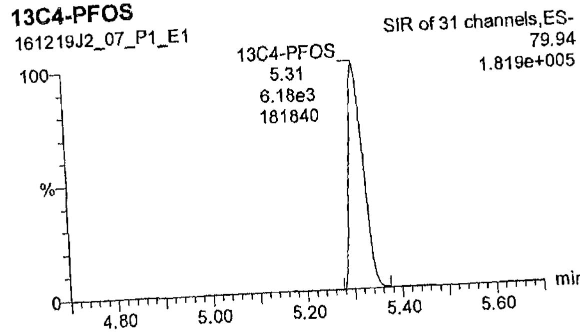

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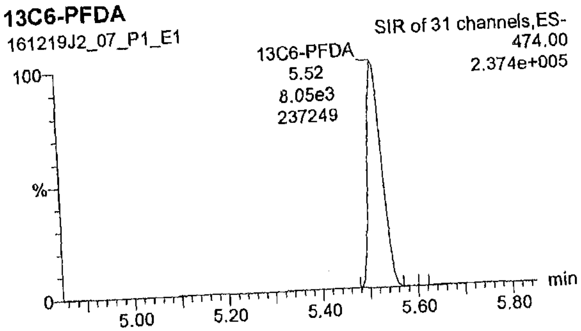

Vista Analytical Laboratory Q2

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Printed: Tuesday, December 20, 2016 10:22:05 Pacific Standard Time

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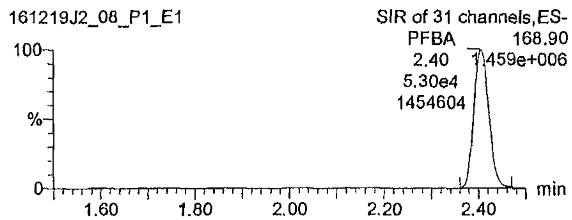

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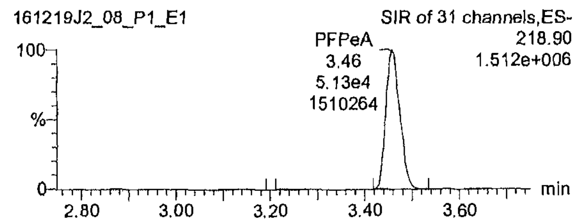

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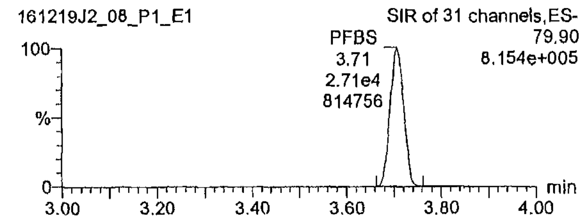

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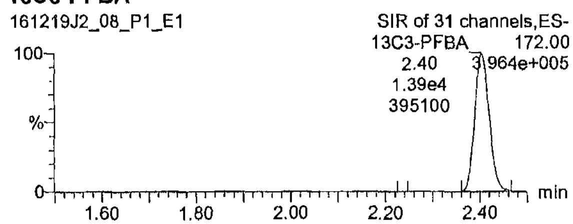

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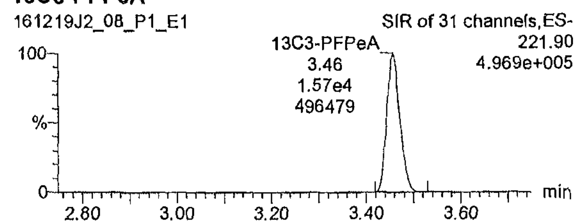

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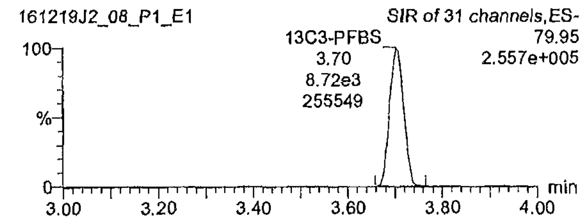

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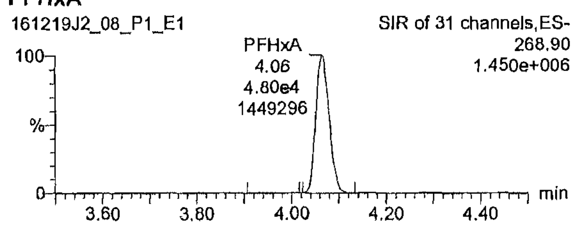

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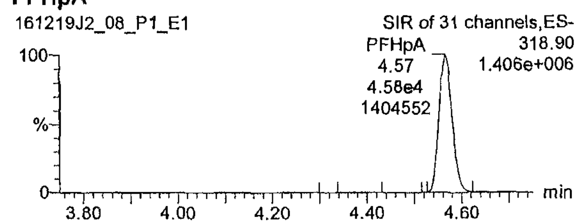

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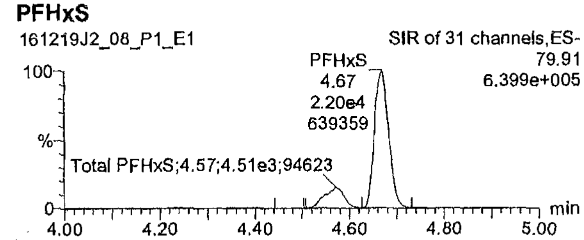

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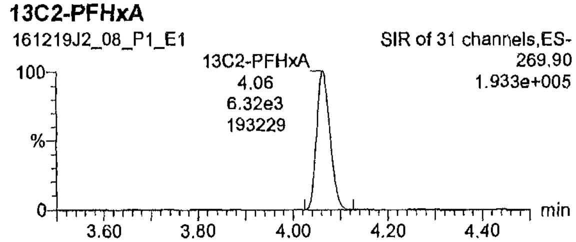

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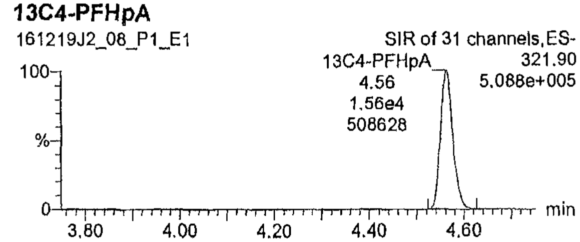
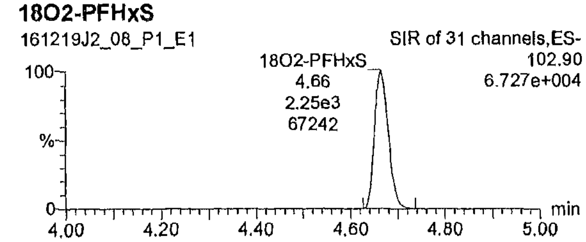


18O2-PFHxS



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Quantify Sample Report MassLynx 4.1 SCN815
Vista Analytical Laboratory Q2

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Printed: Tuesday, December 20, 2016 10:22:05 Pacific Standard Time

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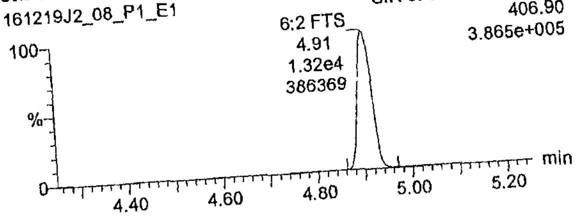

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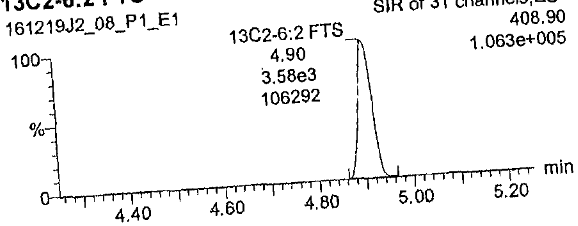

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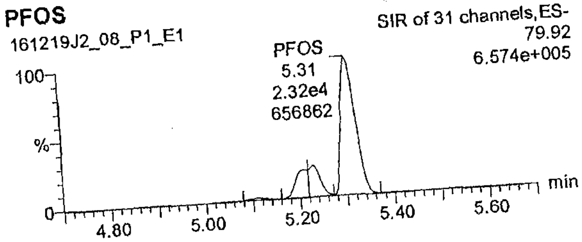
161219J2_08_P1_E1



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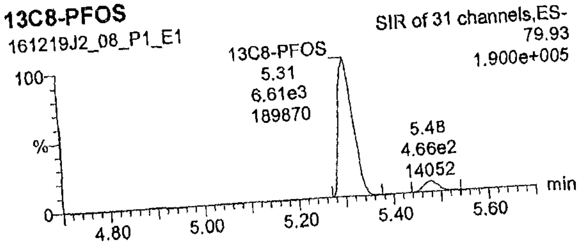

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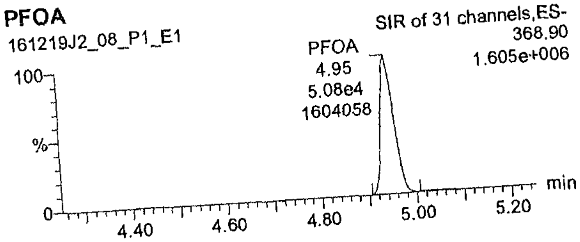
161219J2_08_P1_E1



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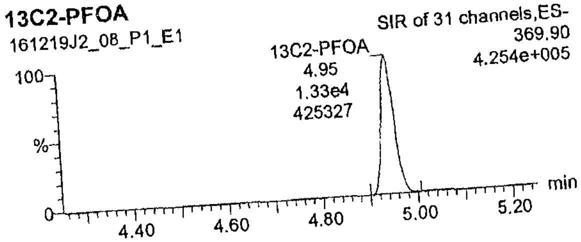

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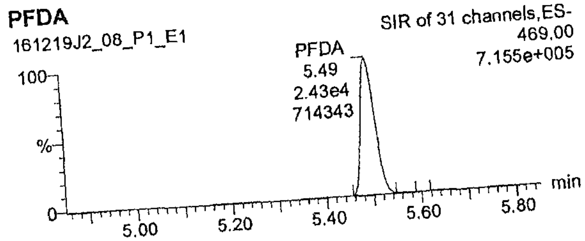

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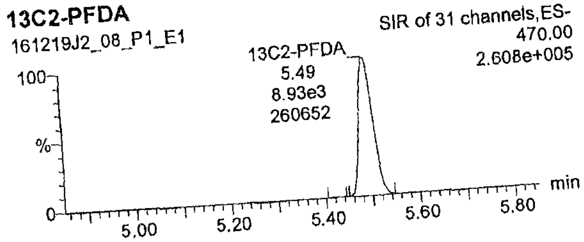

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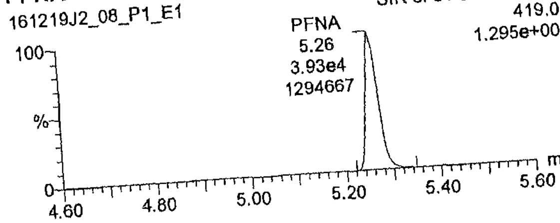

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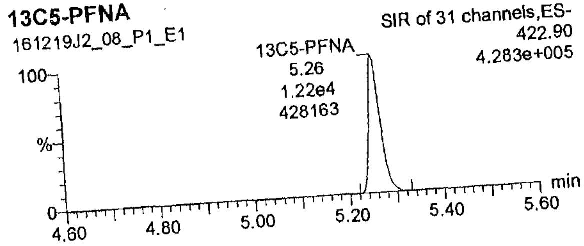
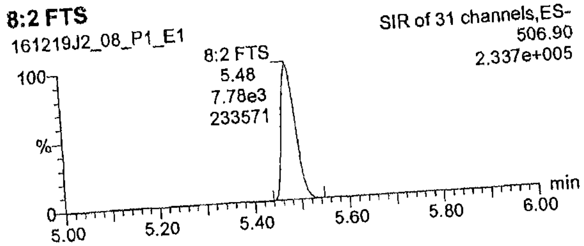
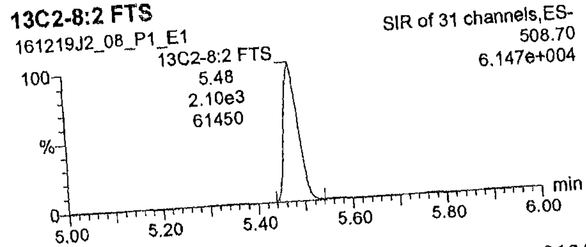
161219J2_08_P1_E1



8:2 FTS
161219J2_08_P1_E1



13C2-8:2 FTS
161219J2_08_P1_E1



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13C4-PFBA
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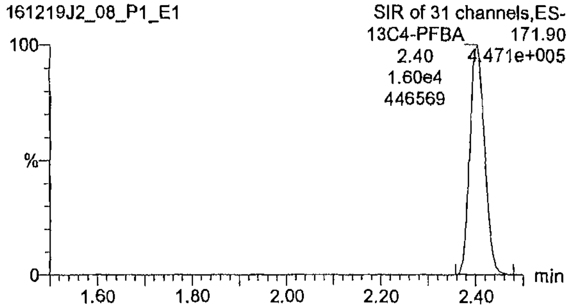

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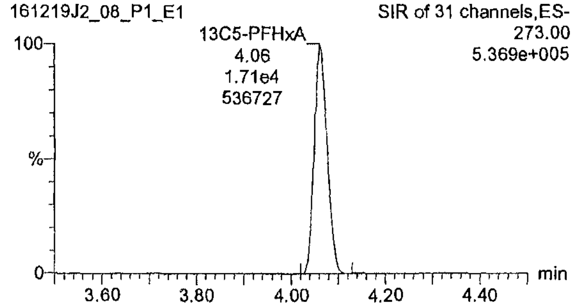

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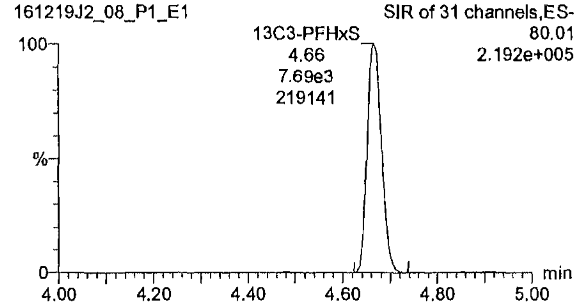

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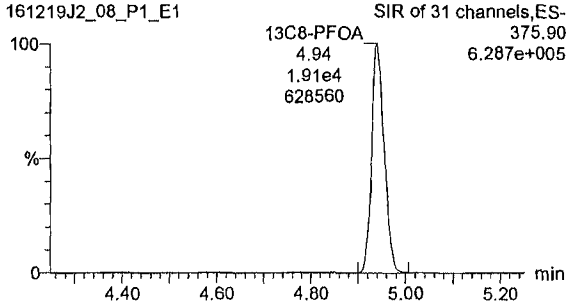
161219J2_08_P1_E1



13C9-PFNA
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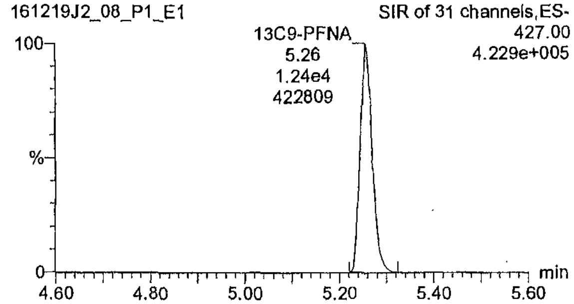

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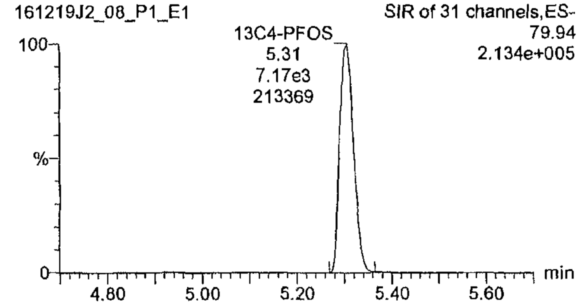

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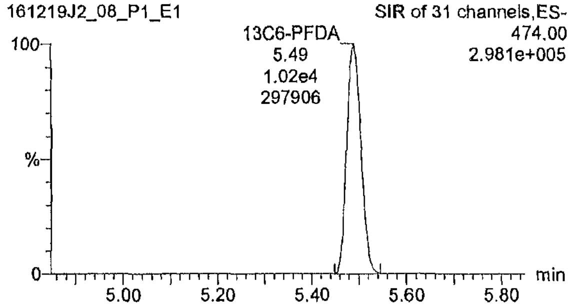

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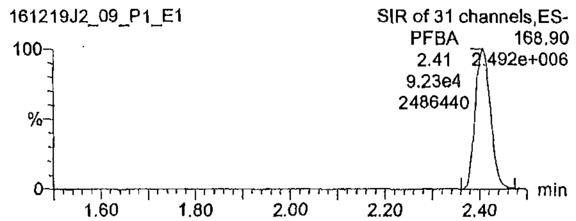

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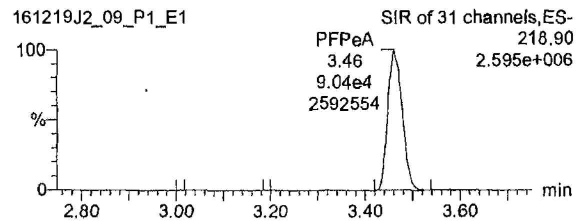

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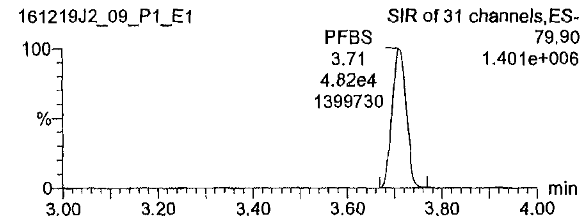

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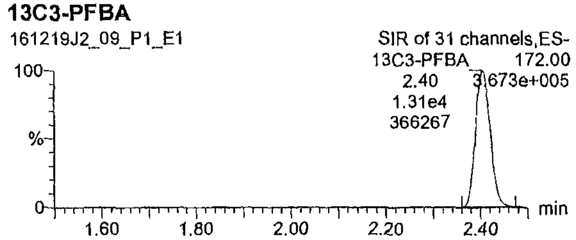

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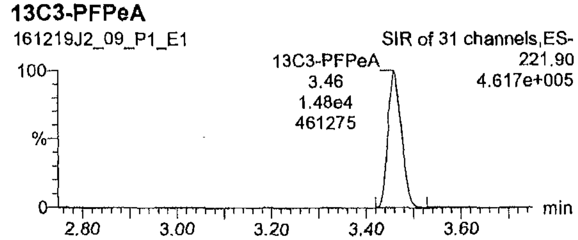

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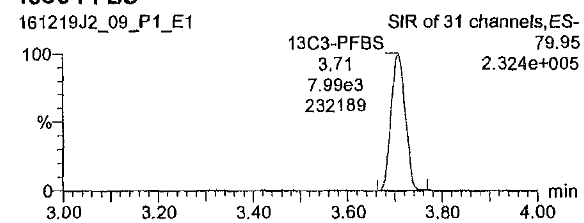

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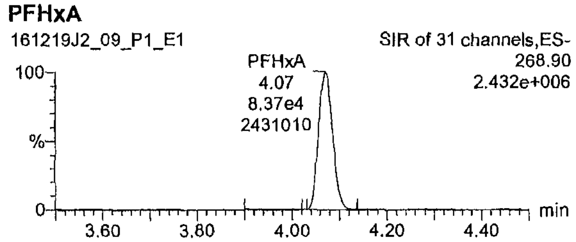

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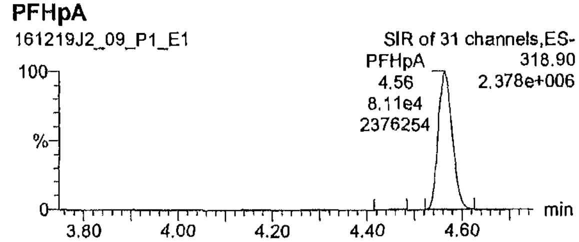

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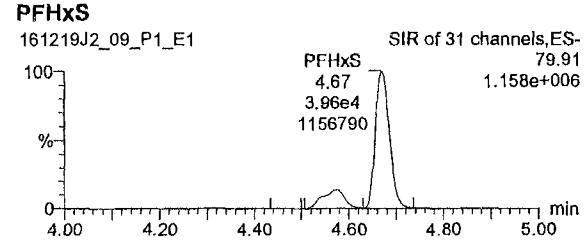

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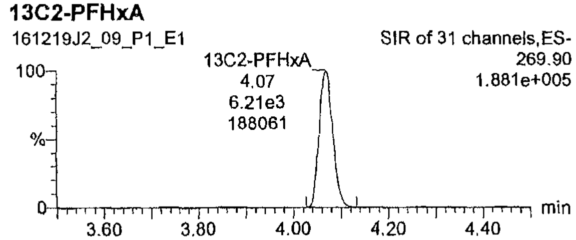

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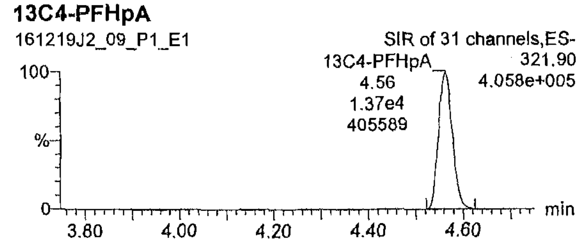

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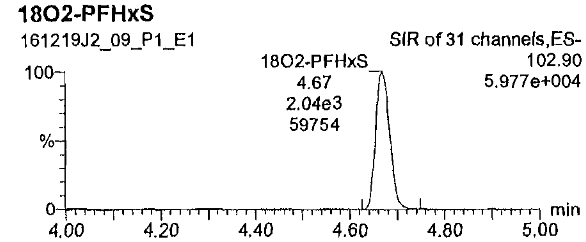

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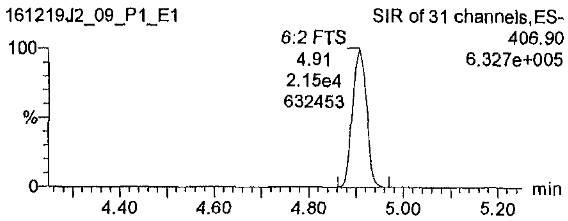

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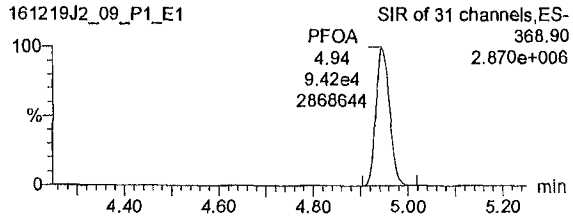

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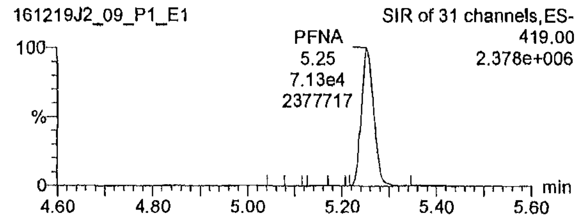

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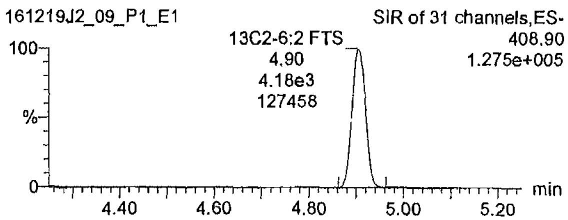

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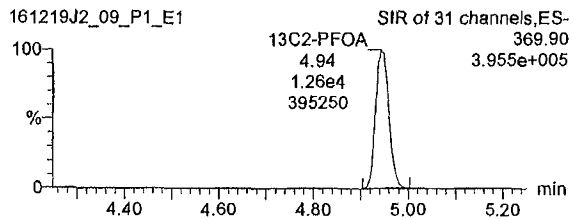
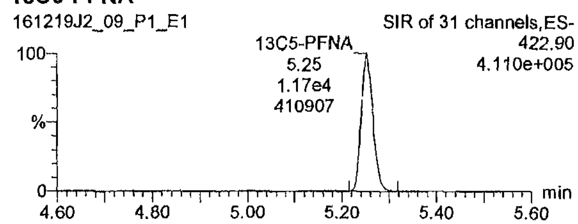
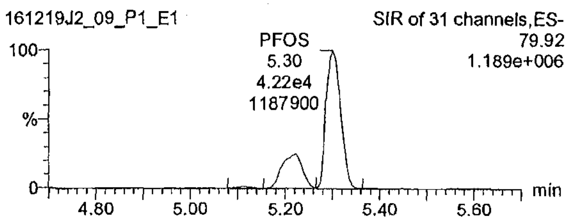


13C5-PFNA



PFOS



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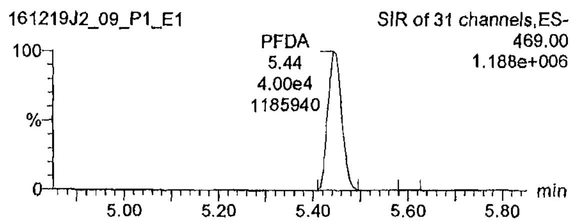

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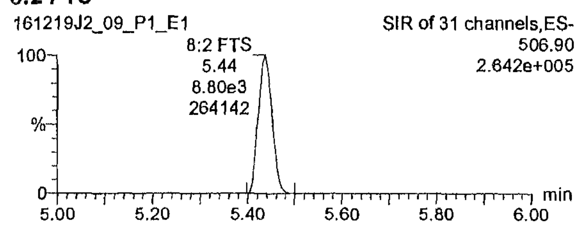

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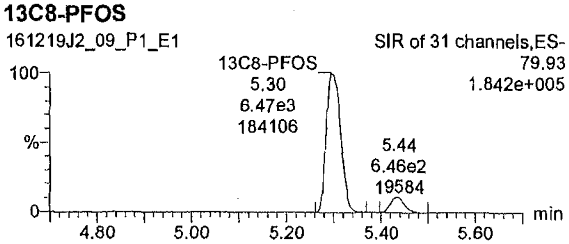

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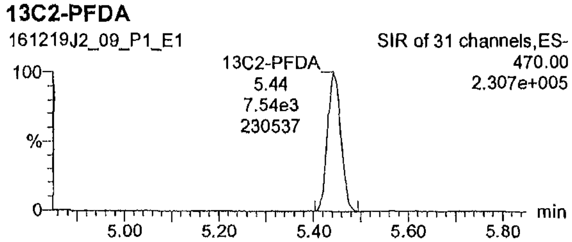
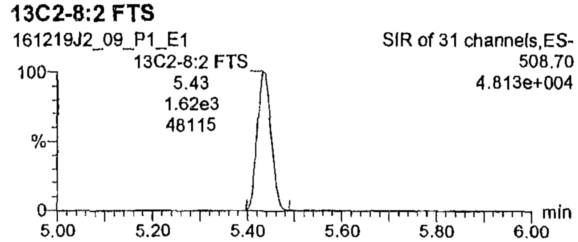


13C2-8:2 FTS



Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q2

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Printed: Tuesday, December 20, 2016 10:22:05 Pacific Standard Time

Name: 161219J2_09.wiff, Date: 19-Dec-2016, Time: 16:33:30, ID: ST161219J2-8 PFC CS5 16L1419 A, Description: PFC CS5 16L1419 A

13C4-PFBA
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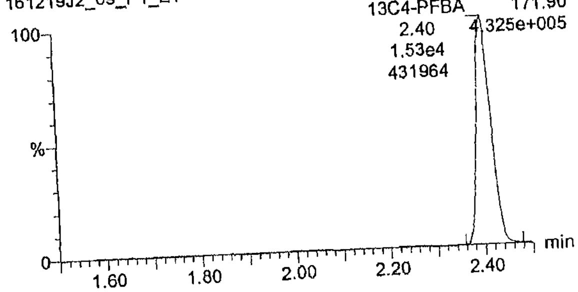

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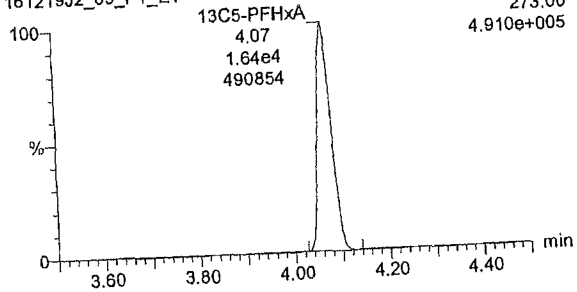
161219J2_09_P1_E1



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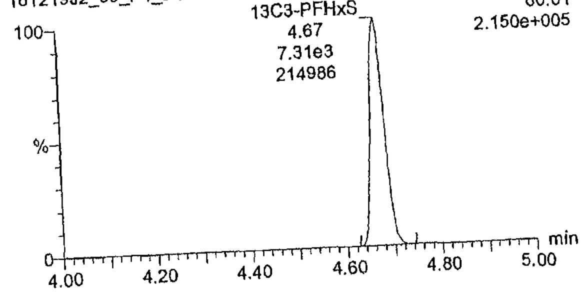

13C8-PFOA
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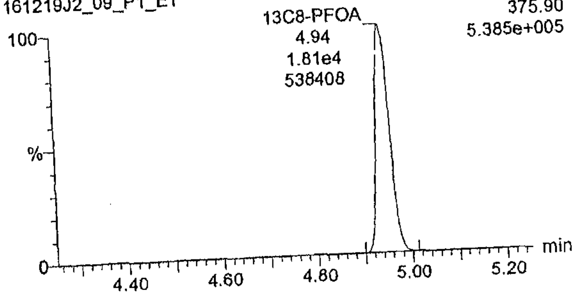
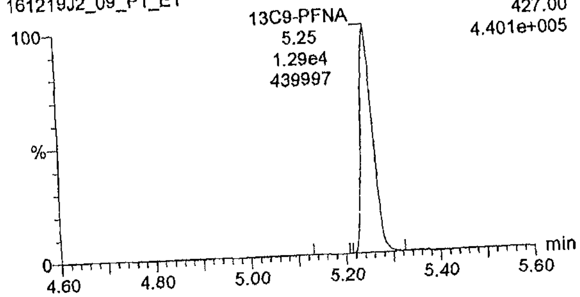


13C9-PFNA
161219J2_09_P1_E1



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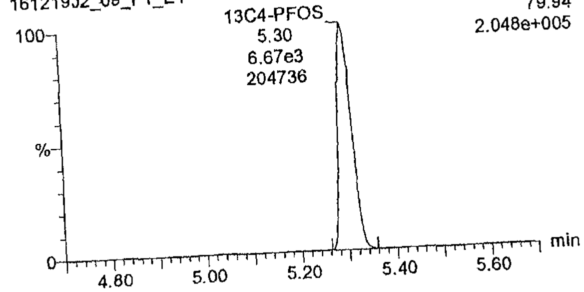

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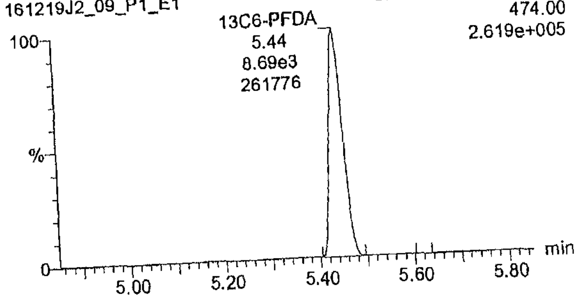

Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_11.qld

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Printed: Tuesday, December 20, 2016 09:58:26 Pacific Standard Time

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Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

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	# Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec	
1	1 PFBA	168.90	3.84e4	1.82e4		1.000	2.41	25.9	103.6	
2	2 PFPeA	218.90	3.04e4	1.98e4		1.000	3.46	21.8	87.4	
3	3 PFBS	79.90	1.77e4	1.18e4		1.000	3.71	23.7	94.6	
4	4 PFHxA	268.90	3.56e4	8.24e3		1.000	4.08	27.1	108.5	
5	5 PFHpA	318.90	3.32e4	1.81e4		1.000	4.58	29.4	117.4	
6	6 PFHxS	79.91	1.33e4	2.82e3		1.000	4.68	23.3	93.1	114.8 A
7	7 6:2 FTS	406.90	7.24e3	4.65e3		1.000	4.93	18.4	B 73.6	
8	8 PFOA	368.90	2.74e4	1.56e4		1.000	4.96	20.9	83.5	105.7 A
9	9 PFNA	419.00	2.48e4	1.33e4		1.000	5.24	27.1	108.4	
10	10 PFOS	79.92	8.95e3	5.19e3		1.000	5.28	23.6	94.3	119.7 A
11	11 PFDA	469.00	6.81e3	4.48e3		1.000	5.42	26.1	104.5	
12	12 8:2 FTS	506.90	2.21e3	1.21e3		1.000	5.41	22.9	91.5	
13	13 13C3-PFBA	172.00	1.82e4	1.82e4	0.857	1.000	2.41	14.7	117.2	
14	14 13C3-PFPeA	221.90	1.98e4	2.00e4	0.866	1.000	3.46	14.3	114.5	
15	15 13C3-PFBS	79.95	1.18e4	2.00e4	0.518	1.000	3.71	14.3	114.2	
16	16 13C2-PFHxA	269.90	8.24e3	2.00e4	0.920	1.000	4.08	5.60	112.1	
17	17 13C4-PFHpA	321.90	1.81e4	2.00e4	0.839	1.000	4.57	13.5	107.9	
18	18 18O2-PFHxS	102.90	2.82e3	8.18e3	0.279	1.000	4.68	15.5	123.7	
19	19 13C2-6:2 FTS	408.90	4.65e3	2.09e4	0.177	1.000	4.92	15.7	125.8	
20	20 13C2-PFOA	369.90	1.56e4	2.09e4	0.665	1.000	4.97	14.0	112.1	
21	21 13C5-PFNA	422.90	1.33e4	1.21e4	0.958	1.000	5.24	14.3	114.7	
22	22 13C8-PFOS	79.93	5.19e3	4.81e3	0.950	1.000	5.28	14.2	113.8	
23	23 13C2-PFDA	470.00	4.48e3	4.43e3	0.822	1.000	5.41	15.4	123.0	
24	24 13C2-8:2 FTS	508.70	1.21e3	4.43e3	0.197	1.000	5.41	17.3	138.3	
25	25 13C4-PFBA	171.90	1.82e4	1.82e4	1.000	1.000	2.41	12.5	100.0	
26	26 13C5-PFHxA	273.00	2.00e4	2.00e4	1.000	1.000	4.08	12.5	100.0	
27	27 13C3-PFHxS	80.01	8.18e3	8.18e3	1.000	1.000	4.68	12.5	100.0	
28	28 13C8-PFOA	375.90	2.09e4	2.09e4	1.000	1.000	4.96	12.5	100.0	
29	29 13C9-PFNA	427.00	1.21e4	1.21e4	1.000	1.000	5.24	12.5	100.0	
30	30 13C4-PFOS	79.94	4.81e3	4.81e3	1.000	1.000	5.28	12.5	100.0	
31	31 13C6-PFDA	474.00	4.43e3	4.43e3	1.000	1.000	5.41	12.5	100.0	

PW 12/20/16

AMSC 12/20/16

A % Rec calc. using linear isomers in mix.
PW 12/20/16

B outside criteria. ~~Data not reported.~~ PW 12/20/16
Data reported will not use.
PW 12/20/16

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_11.qld

Last Altered: Tuesday, December 20, 2016 09:57:39 Pacific Standard Time
Printed: Tuesday, December 20, 2016 09:58:26 Pacific Standard Time

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	# Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
32	32 Total PFBS	79.90		1.18e4		1.000		23.7	
33	33 Total PFHxS	79.91		2.82e3		1.000		28.1	
34	34 Total PFOA	368.90		1.56e4		1.000		24.3	
35	35 Total PFOS	79.92		5.19e3		1.000		32.3	

Quantify Totals Report MassLynx 4.1 SCN815
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_11.qld

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Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

Name: 161219J2_11.wiff, Date: 19-Dec-2016, Time: 16:57:58, ID: SS161219J2-1 PFC SSS 16K2201 A, Description: PFC SSS 16K2201 A

Total PFBS

	# Name	Trace	RT	Area	IS Area	Conc.
1	3 PFBS	79.90	3.71	1.77e4	1.18e4	23.7

Total PFHxS

	# Name	Trace	RT	Area	IS Area	Conc.
1	33 Total PFHxS	79.91	4.56	7.34e2	2.82e3	1.20
2	6 PFHxS	79.91	4.68	1.33e4	2.82e3	23.3
3	33 Total PFHxS	79.91	4.58	2.15e3	2.82e3	3.66

Total PFOA

	# Name	Trace	RT	Area	IS Area	Conc.
1	8 PFOA	368.90	4.96	2.74e4	1.56e4	20.9
2	34 Total PFOA	368.90	4.87	4.90e3	1.56e4	3.48

Total PFOS

	# Name	Trace	RT	Area	IS Area	Conc.
1	10 PFOS	79.92	5.28	8.95e3	5.19e3	23.6
2	35 Total PFOS	79.92	5.22	3.17e3	5.19e3	8.20
3	35 Total PFOS	79.92	5.11	1.76e2	5.19e3	0.486

Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161219J2\161219J2_11.qld

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Printed: Tuesday, December 20, 2016 10:01:32 Pacific Standard Time

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Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-19-16_L18_A.cdb 20 Dec 2016 09:50:44

Name: 161219J2_11.wiff, Date: 19-Dec-2016, Time: 16:57:58, ID: SS161219J2-1 PFC SSS 16K2201 A, Description: PFC SSS 16K2201 A

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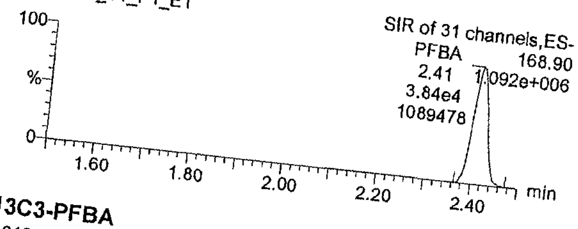

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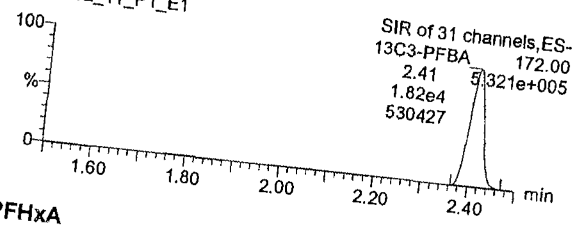

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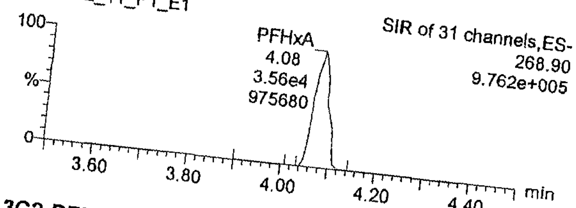

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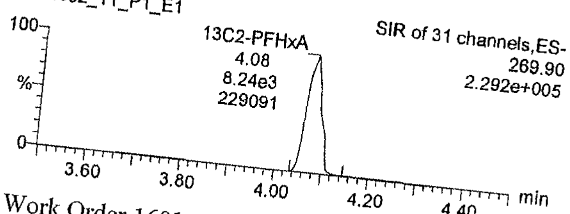

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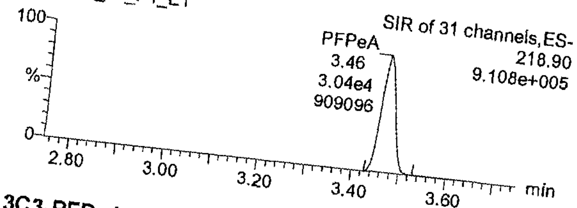

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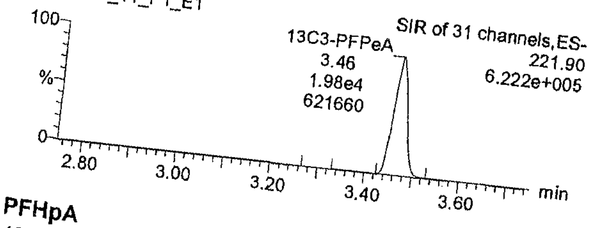

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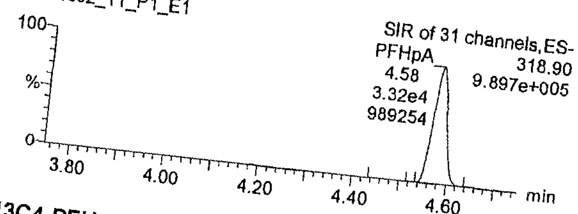

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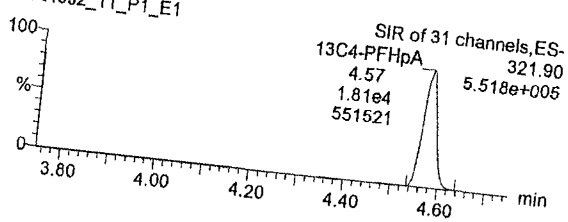

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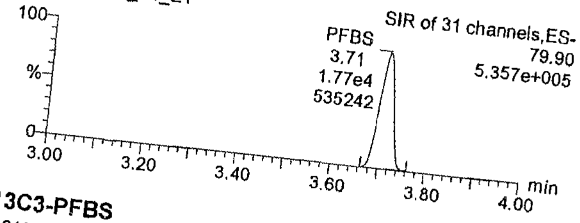

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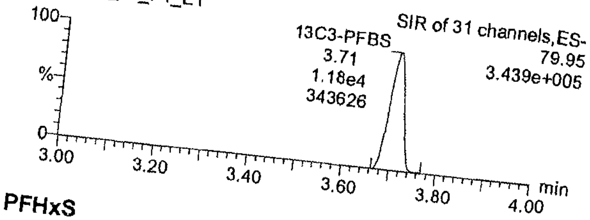

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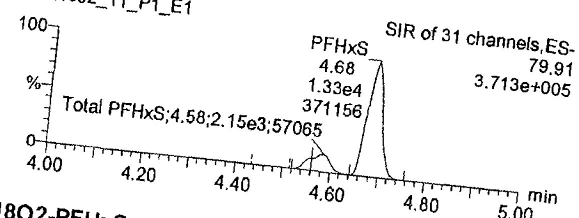

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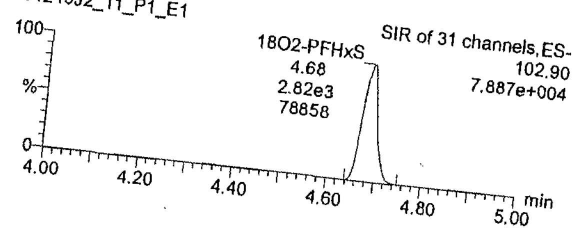

Work Order 1601554

Quantify Sample Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q2

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6:2 FTS
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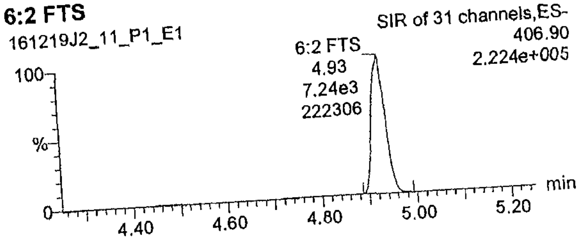

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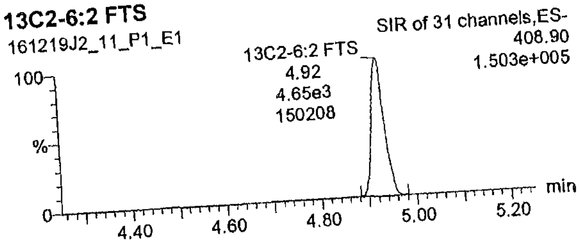
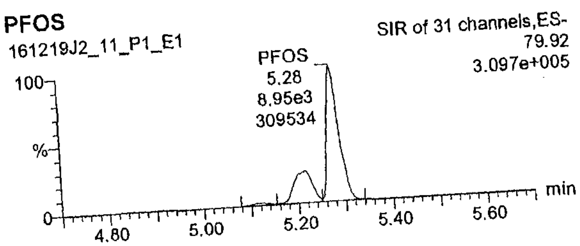
161219J2_11_P1_E1



PFOS
161219J2_11_P1_E1



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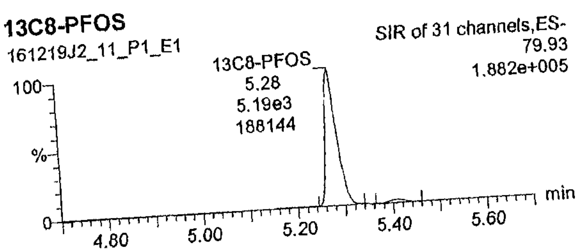
161219J2_11_P1_E1



PFOA
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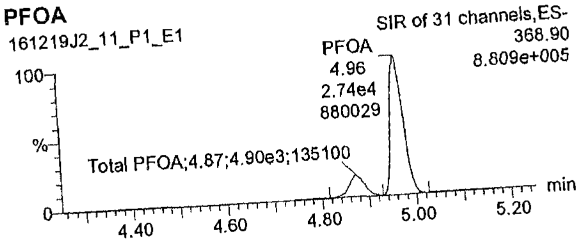

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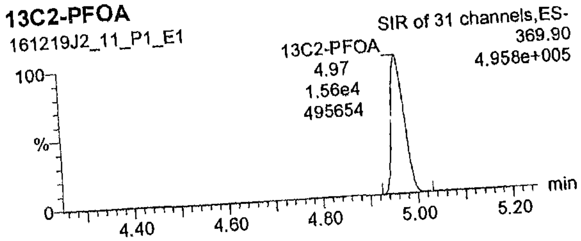

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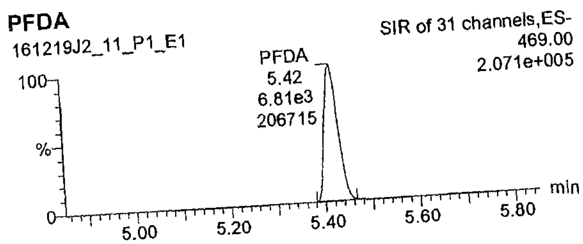

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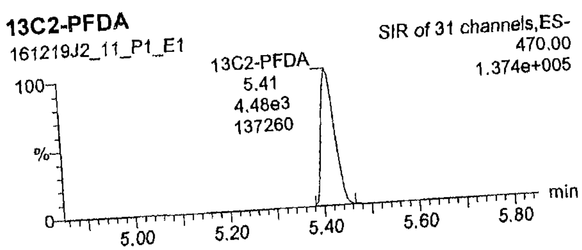

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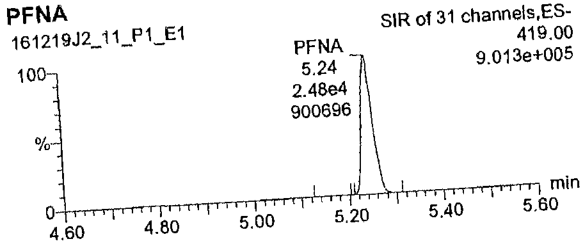

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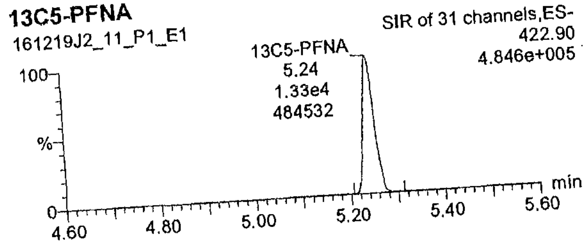
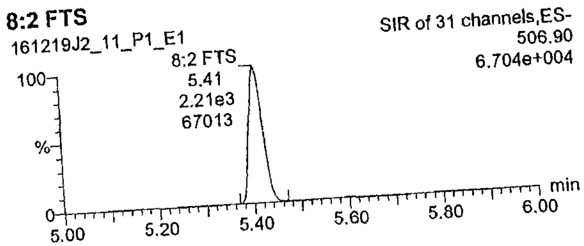


8:2 FTS
161219J2_11_P1_E1



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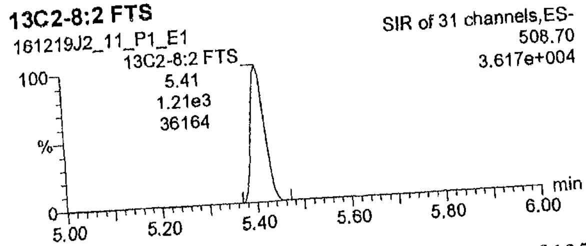
161219J2_11_P1_E1



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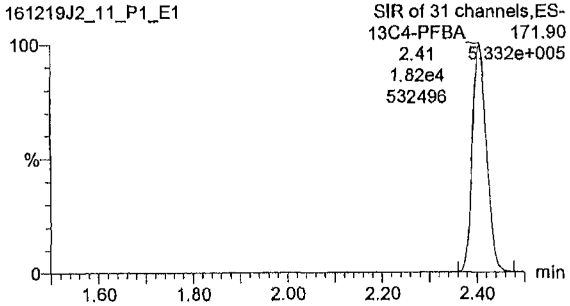

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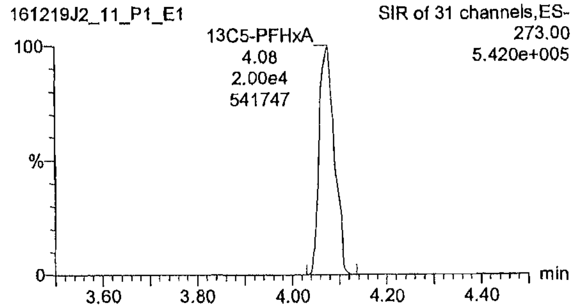

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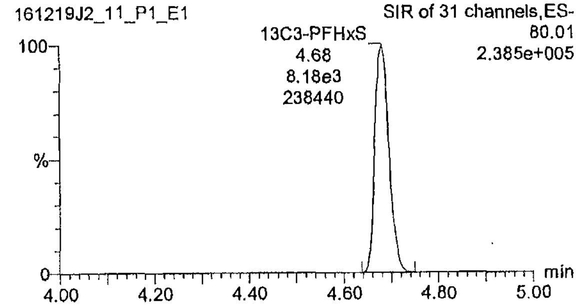

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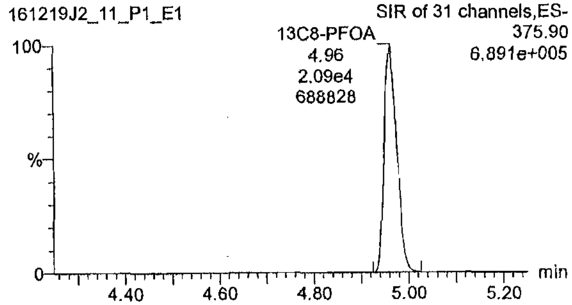

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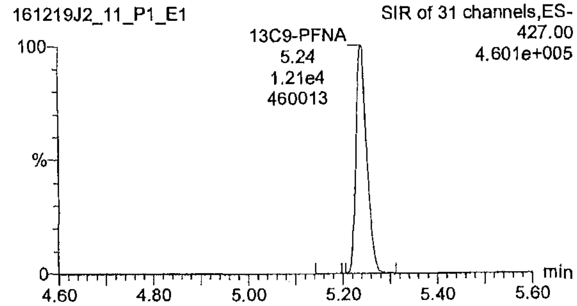

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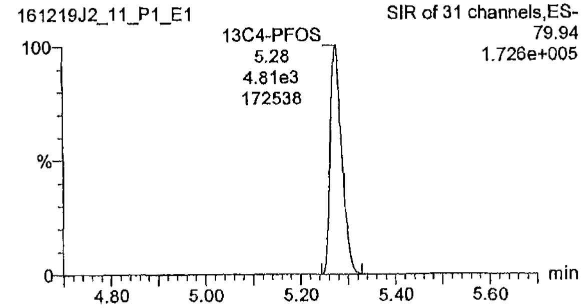

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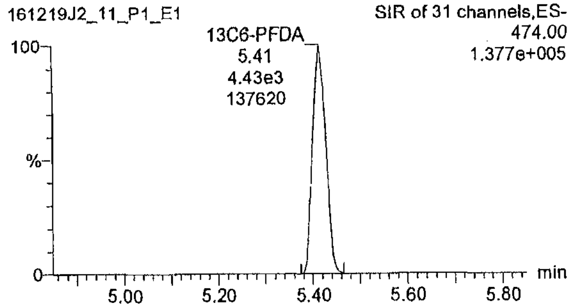

June 27, 2017

Peter Britz
Coakley Project Coordinator
1 Junkins Avenue
Portsmouth, New Hampshire 03801

RE: Results of Spring 2017 Groundwater Sampling at the Coakley Landfill North Hampton, New Hampshire

Dear Mr. Britz:

In response to the Environmental Protection Agency's (EPA) recommendation that further data be obtained to assess site conditions within the Groundwater Management Zone (GMZ), CES, Inc. (CES) sampled monitoring wells defined in the Sampling and Analysis Plan for the first of two rounds to be completed in 2017 from April 25 through May 2, 2017.

Sampling included the addition of the FPC-3 series monitoring wells and five additional surface water/sediment locations (SW-110, SW-111, SW-LR, SW-BB1, and SW-BB2) for all contaminants of concern, as well as sampling OU-1 and OU-2 monitoring wells for 1,4-dioxane, perfluorinated compounds (PFCs) and hexavalent chromium. A leachate seep sample (L-1) was included in this sampling event as has been done annually, but it is the first event that included PFC analyses.

A Site plan showing the groundwater monitoring well locations are included as **Figure 1**. **Tables 1 through 8** show the results of the Spring 2017 Sampling.

This letter is intended to provide the Coakley Landfill Group (CLG) with a brief preliminary assessment of the data to coincide with EPA and NHDES' request to receive a copy of validated data tables as soon as possible following receipt of analytical data. The attached tables contain validated data.

SAMPLING RESULTS

Groundwater Sampling

Table 2 presents a summary of analytical results from samples collected from monitoring wells in OU-1 and OU-2. Arsenic concentrations were reported above the EPA Cleanup Level (CL) and NHDES Ambient Groundwater Quality Standard (AGQS) of 10.0 micrograms per liter (ug/L) in six OU-1 wells and eight OU-2 wells. Manganese was detected at concentrations above the CL (0.3 mg/L) and/or AGQS (0.84 mg/L) in nine OU-1 wells and ten OU-2 wells.

With few exceptions, arsenic and manganese results are similar to 2016 results and are considered stable. All of the detections of arsenic and manganese were within historical

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640 Main Street
Lewiston, Maine 04240
T 207.795.6009
F 207.795.6128

concentration ranges, with the exception of arsenic at BP-4 and FPC-11A and manganese at OP-2 and AE-2A.

Hexavalent chromium was not reported above the laboratory detection limit (0.1 mg/L) in any of the wells sampled in OU-1 or OU-2.

All OU-1 and OU-2 monitoring wells were analyzed for 1,4-dioxane during the Spring 2017 sampling event. A total of six OU-1 wells and nine OU-2 wells detected 1,4-dioxane at a concentration above the CL and AGQS of 3 ug/L.

Volatile organic compounds were not detected at concentrations above the CL or AGQS in any of the wells sampled, with the exception of one parameter (tert-butyl alcohol) in one well (MW-8). Tert-butyl alcohol concentrations are stable in well MW-8

For OU-1 samples, concentrations of PFOA ranged from 1.86 parts per trillion (ppt) (OP-5) to 1,240 ppt (MW-4). PFOA concentrations above the Lifetime Health Advisory (HA) standard (70 ppt) were detected in eight of the eleven wells sampled. For OU-2 samples, concentrations of PFOA ranged from non-detect (six wells) to 902 ppt (AE-2) and were reported above the HA standard in nine of twenty-three wells sampled.

Concentrations of PFOS ranged from non-detect (OP-5) to 429 ppt (MW-9) in OU-1 wells. PFOS was reported above the standard (70 ppt) in five of the eleven wells sampled. Concentrations of PFOS in OU-2 wells ranged from ND (six wells) to 456 ppt (AE-2B).

The combined concentrations of PFOA and PFOS exceeded the standard (70 ppt) in nine of eleven OU-1 wells sampled and nine of twenty-three OU-2 wells sampled.

Although some wells reported concentrations slightly above previous concentrations, results are relatively consistent with results reported for the June 2016 sampling of these wells. It should be noted that this is only the second round of PFC data from OU-1 and OU-2 monitoring wells so insufficient data exists to determine trends at any particular location.

FPC-3 Series Wells

Table 2 presents a summary of analytical results from samples collected from FPC-3 series monitoring wells in OU-2. As shown on the Table, one parameter (arsenic) in one well (FPC-3C) was reported slightly above the EPA Cleanup Level (CL) and NHDES Ambient Groundwater Quality Standard (AGQS) of 0.01 parts per million (ug/L). Manganese was detected at concentrations below the CL and AGQS in all wells sampled.

1,4-dioxane was reported as Not Detected (ND) in wells FPC-3A and FPC-3B, but was detected at a concentration of 0.48 ug/L in FPC-3C, well below the CL and AGQS of 3 ug/L and consistent with 2016 results.

Volatile organic compounds were not detected above the laboratory detection limit in any of the FPC-3 wells sampled.

PFOA and PFOS were reported as ND in all FPC-3 series wells.

These results are consistent with results reported for the December 2016 sampling of these wells. EPA and DES had requested sampling of these wells to assist in establishing the southerly extent of impacts within the GMZ. To date, data from the FPC-3 series wells suggests that the southern extent of landfill related impacts is proximal to the FPC-3 series wells.

Surface Water Sampling

Table 3 presents a summary of analytical results from eight surface water sampling locations. The locations are shown on **Figure 1**

As shown on **Table 3**, one parameter (copper) in one surface water sample (SW-103) was reported slightly above the NHDES Chronic Surface Water Standard of 0.0027 parts per million (mg/L), but below the acute standard. Arsenic was reported in four surface water samples at a concentration of 0.001 mg/L, well below the Chronic standard of 0.15 mg/L. Manganese was reported at concentrations ranging from 0.022 to 0.22 mg/L. Manganese does not have a Chronic or Acute standard.

1,4-dioxane was reported at concentrations ranging from non-detect to 1.3 ug/L. 1,4-dioxane does not have a chronic or acute standard.

The combination of PFOA and PFOS was reported in surface water samples at concentrations ranging from 16.97 to 1,521 parts per trillion (ppt) during the Spring 2017 sampling event.

Two surface water samples designated SW-110 and SW-111 were collected at locations previously sampled by the NHDES (CLK-SW10 and CLK-SW14, respectively, in December 2016). 1,4-dioxane was not detected in either sample during the spring 2017 event, but had previously been detected in NHDES sample CLK-SW10 at a concentration of 0.36/0.38 (dup) ug/L.

The combination of PFOA and PFOS were detected in the December 2016 NHDES sampling round at a concentration of 297/308 (dup) ppt in CLK-SW10 and at a concentration of 275.1 ppt in the Spring of 2017 at location SW-110. The combination of PFOA and PFOS were detected at a concentration of 90 ppt in December 2016 and at a concentration of 82.5 ppt in the Spring of 2017 at location SW-111.

In a February 16, 2017 Coakley Landfill Update, EPA and DES presented surface water and sediment "Screening Levels" for PFOA, PFOS and PFBS in Berry's Brook. Screening Levels were established using a maximum exposure scenario and a mid-range exposure scenario for both children and adults.

None of the detected concentrations of PFOS, PFOA or PFBS in any surface water sample exceeded the mid-range child or adult screening level and did not exceed the adult maximum exposure screening level. Results for two surface water sampling locations, SW-5 and SW-103, located near the landfill slightly exceeded the child maximum exposure scenario. Concentrations at the other six surface water sampling locations were below the child maximum exposure screening level.

Sediment Sampling
Table 4 presents a summary of analytical results from five sediment sampling locations as shown on **Figure 1**. Two additional sediment locations (SED-111 and SED-BB1) were included in the sampling plan, but were not sampled due to the fact that one was under four feet of water (SED-111) and one was a roadside ditch filled with railroad ballast and there was no sediment to collect (SED-BB1). [Note that surface water samples were taken from these locations]

As shown on **Table 4**, four parameters (total arsenic, total copper, total lead, and total mercury) in one or more sediment samples were reported at concentrations above their associated NOAA SQuiRT TEC Standard. Sediment locations SED-4, SED-5, and SED-110 reported exceedances for Total Lead and Total Mercury. Sediment location SED-5 also reported exceedances of Total Arsenic and Total Copper. Results for SED-4 and SED-5 are consistent with historical results. This was the first-time SED-LR, SED-110, and SED-BB2 were sampled. Concentrations of parameters at SED-LR and SED-BB2 were below their respective SQuiRT TEC Standards.

1,4-dioxane was not reported in any of the sediment samples collected.

The combination of PFOA and PFOS was reported in sediment samples at concentrations ranging from non-detect (SED-LR) to 0.181 milligrams per kilogram (mg/kg) (SED-5-DUP). Neither 1,4-dioxane or PFOA/PFOS have SQuiRT TEC standards.

None of the PFOA, PFOS or PFBS concentrations in sediment exceeded the maximum or mid-range screening levels established by EPA/DES.

Leachate Seep Sampling
Table 5 presents a summary of analytical results from the regular and duplicate samples collected for the leachate seep sample location L-1. As shown on the Table, one parameter (iron) was reported above the NHDES Chronic Surface Water Standard.

1,4-dioxane was reported as at concentrations of 1.5 and 1.3 ug/L (original and duplicate sample), well below concentrations previously (2011-2013, not sampled 2014-2016) reported for this parameter at this location. Concentrations of other parameters analyzed at this location were consistently below concentrations reported in June 2016.

PFOA and PFOS were analyzed for the first time at this location. Results include both the original and a duplicate sample. PFOA was reported at 656 and 736 ppt and PFOS was reported at concentrations of 1930 and 1560 ppt. The combined concentrations for PFOA/PFOS were 2586 and 2296 ppt. Combined PFOA and PFOS concentrations at L-1 are the highest reported in any of the samples collected in 2016 and 2017. Given that this sample location may be indicative of a discharge from within or nearest to the waste mass, the high concentration would be consistent with proximity to the “source”. However, it is unusual in the sense that PFOS concentrations are considerably higher than PFOA concentrations at L-1, while the vast majority of site data show a considerably higher PFOA concentration compared to PFOS concentrations at individual locations.

We also note that the L-1 location is a surface discharge location that may subsequently migrate via surface drainage to the wetland area west of the landfill and/or other surface water locations downstream of this location (SW-5 and SW-103). PFOA concentrations at SW-5 and SW-103 are similar to concentrations reported for L-1, but PFOS concentrations at SW-5 and SW-103 are significantly lower than those reported for L-1.

SUMMARY

Based on the results of the Spring 2017 sampling, the following findings were made:

- Hexavalent chromium was not detected above the detection limit in any of the groundwater samples collected.
- Results for the FPC-3 series wells were consistent will the December 2016 sampling results, with one parameter (arsenic) being reported above the standard in one well (FPC-3C). Remaining parameters were reported as ND or below applicable standards.
- One parameter (copper) was reported above the NHDES Chronic surface water standard at one location (SW-103).
- The two surface water samples (SW-110 and SW-111) collected in the same locations as samples previously collected by NHDES (CLK-SW10 and CLK-SW14, respectively) reported similar 1,4-dioxane and PFC concentrations.
- Four parameters (total arsenic, total copper, total lead, and total mercury) in one or more sediment samples were reported above their associated NOAA SQuiRT TEC Standard, which is consistent with historical results.
- PFOA/PFOS, analyzed for the first time at leachate seep location (L-1) reported combined concentrations of 2586 and 2296 ppt (original and duplicate sample). These PFC concentrations are the highest reported concentrations of any media or samples to date at the Site.

A more detailed data summary report will be prepared for submittal to EPA and NHFDES, following completion of our full assessment of data generated from the spring 2017 sampling event.

If you have any questions concerning this letter, please contact either of the undersigned at (207) 795-6009.

Sincerely,
CES, Inc.

Suzanne Yerina, P.G.
Project Geologist

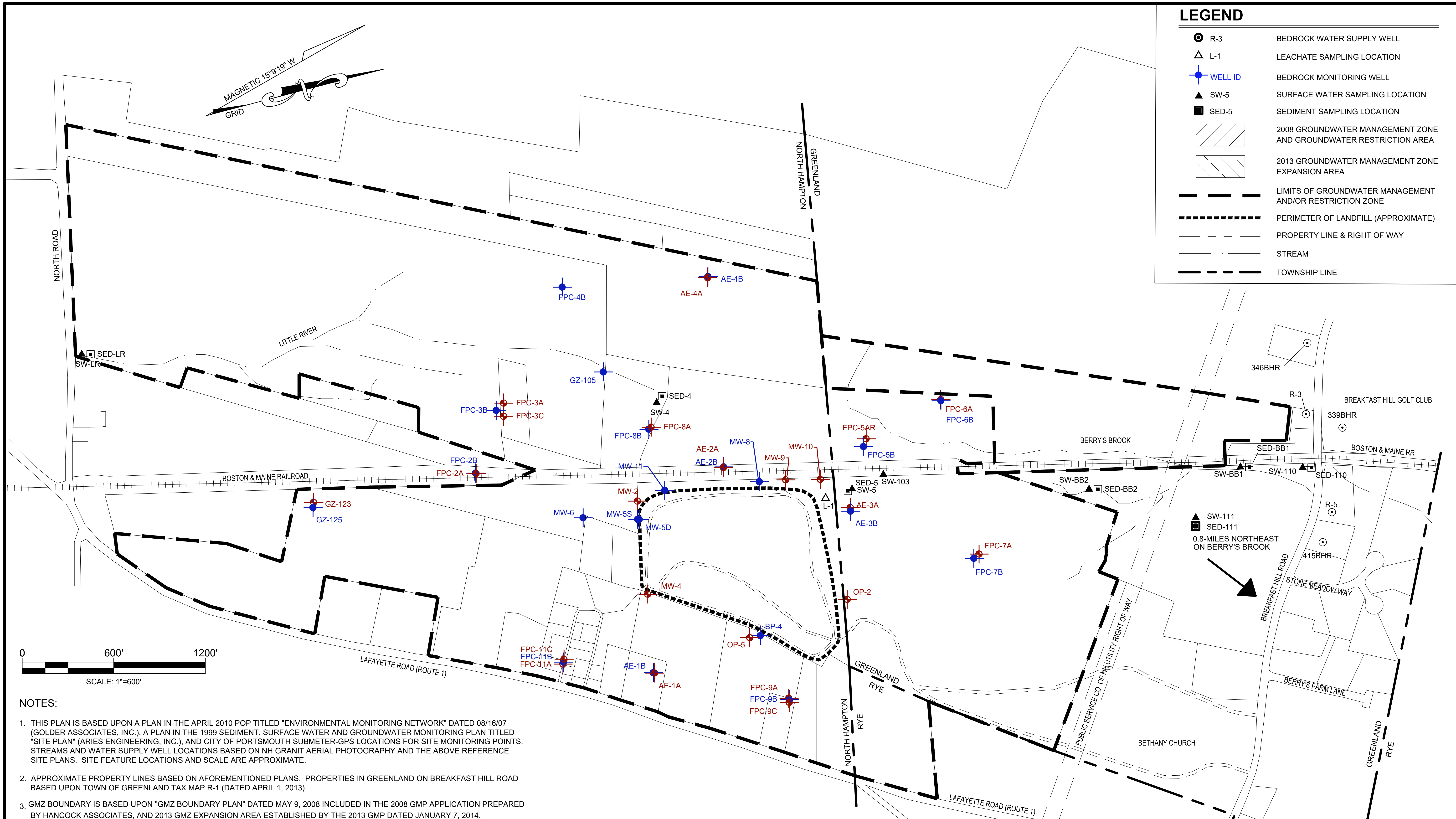
Michael A. Deyling, P.G.
Senior Project Geologist

SLY/MAD/jna

Enclosures

CES INC

FIGURES



NOTES:

1. THIS PLAN IS BASED UPON A PLAN IN THE APRIL 2010 POP TITLED "ENVIRONMENTAL MONITORING NETWORK" DATED 08/16/07 (GOLDER ASSOCIATES, INC.), A PLAN IN THE 1999 SEDIMENT, SURFACE WATER AND GROUNDWATER MONITORING PLAN TITLED "SITE PLAN" (ARIES ENGINEERING, INC.), AND CITY OF PORTSMOUTH SUBMETER-GPS LOCATIONS FOR SITE MONITORING POINTS. STREAMS AND WATER SUPPLY WELL LOCATIONS BASED ON NH GRANIT AERIAL PHOTOGRAPHY AND THE ABOVE REFERENCE SITE PLANS. SITE FEATURE LOCATIONS AND SCALE ARE APPROXIMATE.
2. APPROXIMATE PROPERTY LINES BASED ON AFOREMENTIONED PLANS. PROPERTIES IN GREENLAND ON BREAKFAST HILL ROAD BASED UPON TOWN OF GREENLAND TAX MAP R-1 (DATED APRIL 1, 2013).
3. GMZ BOUNDARY IS BASED UPON "GMZ BOUNDARY PLAN" DATED MAY 9, 2008 INCLUDED IN THE 2008 GMP APPLICATION PREPARED BY HANCOCK ASSOCIATES, AND 2013 GMZ EXPANSION AREA ESTABLISHED BY THE 2013 GMP DATED JANUARY 7, 2014.

PROJECT TITLE: COAKLEY LANDFILL SUPERFUND SITE NORTH HAMPTON & GREENLAND, NEW HAMPSHIRE	DWG:	BY: BLQ	REV:	DESCRIPTION:
		DATE: 2017-06-14	REV DATE:	
SHEET TITLE: SITE PLAN	JN: 10424.008	APPROVED BY: SLY	ISSUE:	DESCRIPTION:
	SCALE: 1"=600'	CHECKED BY: SLY	ISSUE DATE:	

CES INC
Engineers • Environmental Scientists • Surveyors

TABLES

TABLE 1

Summary of Groundwater Elevation Data

2016 Annual Summary Report

Coakley Landfull Superfund Site

North Hampton, New Hampshire

MONITORING WELL IDENTIFICATION	Ref. Pt Elev. (FT. NGVD)	May-87 GW. EL. FT.	Screened Interval FT.	Apr-93 GW. EL. FT.	Dec-96 GW. EL. FT.	Apr-97 GW. EL. FT.	Sep-97 GW. EL. FT.	Dec-97 GW. EL. FT.	Jun-98 GW. EL. FT.	Aug-98 GW. EL. FT.	Apr-99 GW. EL. FT.	Aug-99 GW. EL. FT.	Nov-99 GW. EL. FT.	Apr-00 GW. EL. FT.	Aug-00 GW. EL. FT.	Nov-00 GW. EL. FT.	Apr-01 GW. EL. FT.	Aug-01 GW. EL. FT.	Jun-02 GW. EL. FT.	Aug-02 GW. EL. FT.	Aug-03 GW. EL. FT.	Aug-04 GW. EL. FT.	Aug-05 GW. EL. FT.	Aug-06 GW. EL. FT.	Nov-07 GW. EL. FT.	Aug-08 GW. EL. FT.	Aug-09 GW. EL. FT.	Aug-10 GW. EL. FT.	Aug-11 GW. EL. FT.	Aug-12 GW. EL. FT.	Aug-13 GW. EL. FT.	Sep-14 GW. EL. FT.	Sep-15 GW. EL. FT.	May-16 GW. EL. FT.	Apr-17 GW. EL. FT.
Operating Unit 1																																			
BP-4	111.70		33.6-99.0		98.94	97.83	96.07	95.84	99.55	97.03	97.04	95.26	95.93	97.1	96.93	96.03	99.37	96.29	97.27	96.26	96.51	96.89	96.34	97.71	95.72	97.52	99.00	96.55	96.75	96.48	97.39	96.15	96.35	97.35	99.14
MW-2	94.54	90.57	10-20															86.75	89.00						88.61	88.95	88.40	87.88	88.79	86.85	87.69	85.69	87.14	88.19	89.27
MW-4	129.12		28-38	101.52							98.41	95.94	96.78	97.92	97.61	96.65	100.33	96.88	98.01	96.99	97.07	97.35	96.71	98.12	96.17	97.98	98.43	96.93	97.20	96.90	97.75	96.49	96.72	97.71	99.65
MW-5S (Note 4)	101.96		48-78	93.69							91.89	87.81	90.96	91.5	91.11	91.24	92.24	89.33	91.46	88.78	88.71	90.89	88.54	91.42	89.54	91.47	90.99	89.70	89.89	89.02	90.06	88.33	88.76	90.20	91.31
MW-5D (Note 4)	99.72		139-159								91.22	87.17	90.1	90.74	89.92	90.31	91.72	88.60	90.60	88.12	89.22	89.96	88.02	89.82	88.61	90.42	90.35	88.96	89.11	88.25	89.52	87.70	87.93	89.62	90.91
MW-6	101.15	91.89	25-184	93.4	93.84	93.44	90.04	92.25	93.44	91.33	92.55	88.03	91.98	92.52	92.20	92.32	93.23	89.79	92.50	89.16	90.09	92.13	89.01	92.46	90.52	92.42	91.93	90.58	90.73	89.66	90.40	88.78	89.71	90.70	91.86
MW-8 (Note 4)	85.02		44-65		81.1	79.46	78.48	78.07	78.71	76.66	78.32	75.04	77.63	78.09	77.70	78.22	78.33	76.02	77.93	75.64	76.32	77.58	75.66	77.90	76.61	78.20	77.61	76.35	77.26	75.70	77.42	75.25	75.21	77.11	78.27
MW-9	82.62		5-10		77.97	78.03	75.87	76.06	77.16	74.47	75.82	73.42	75.46	76.09	76.00	76.86	76.88	74.10	75.74	73.81	73.28	76.13	73.94	75.71	75.80	76.88	75.35	74.64	77.15	74.15	75.22	73.84	74.15	75.15	77.28
MW-10	80.60		5-10		74.56	74.67	73.96	74.07	74.68	73.17	74.51	72.78	74.57	74.63	74.83	75.06	75.22	73.93	74.91	73.45	74.20	74.93	73.99	74.71	74.95	74.86	74.50	74.21	75.46	74.22	74.50	74.05	74.80	74.62	75.10
MW-11	92.70		32-52		87.21	85.36	83.56	83.81	83.69	81.77	83.42	79.17	82.42	82.8	82.35	82.40	83.09	80.59	82.67	80.11	81.24	82.26	79.85	82.89	81.07	82.99	82.58	81.08	81.54	80.36	82.10	79.46	79.89	82.15	83.14
OP-2 (Note 4)	100.00		7-12	91.44	95.86	95.4				92.85	93.62	91.03	92.39	93.37	93.27	92.75	87.25	92.00	93.49	91.85	92.26	93.05	91.94	93.80	92.28	94.04	93.98	92.50	93.17	92.52	77.42	92.28	92.53	93.84	95.34
OP-5	112.68		13-23	94.92	99.26	98.28	96.59	96.41	100.41	100.41	97.39	95.84	96.41	97.58	97.33	96.40	107.29	97.54	97.72	96.82	96.98	97.31	96.78	98.03	96.04	97.81	98.28	96.91	97.22	96.86	97.72	96.48	96.67	97.61	99.45
Operating Unit 2																																			
AE-1A	127.00		54-64								97.95	95.55	96.21	97.37	97.23	96.34	99.67	96.54	97.54	96.53	96.67	97.05	97.35	98.10	95.89	97.74	98.19	96.74	97.00	96.63	97.53	96.32	96.55	97.48	99.39
AE-1B	126.80		75-85								97.91	95.51	96.13	97.35	97.19	96.31	99.65	96.43	97.51	96.51	96.65	97.09	96.49	98.09	95.87	97.73	97.98	96.55	96.93	96.61	97.51	96.30	96.53	96.45	99.38
AE-2A	79.60		10-20									72.49	75.74	75.71	75.67	76.03	75.69	73.58	75.66	72.98	73.75	75.19	73.18	75.70	74.69	75.81	75.29	73.76	75.00	73.52	74.70	72.92	73.32	75.29	75.89
AE-2B	79.50		40-50									72.59	75.79	75.79	75.44	76.04	75.78	73.49	75.65	73.16	74.42	75.33	73.60	75.61	74.22	75.94	76.02	74.35	74.26	74.01	75.30	73.49	73.56	75.65	76.46
AE-3A	86.10		??-17.5								77.47	76.64	77.74	77.56	77.99	77.92	77.80	77.05	77.70	76.86	76.30	77.90	77.14	78.02	77.90	77.98	78.68	77.30	78.30	77.04	77.50	76.75	77.03	77.54	77.85
AE-3B	87.30		28-40								78.55	77.19	78.38	78.35	78.47	78.61	78.64	78.30	78.49	77.47	77.90	78.58	76.86	78.66	78.47	78.50	78.32	77.76	78.84	77.50	77.84	77.22	77.45	81.09	78.68
AE-4A	77.20		5-15																			73.47	70.75	73.75	72.91	73.10	73.20	71.49	73.10	70.80	72.29	70.42	71.20	72.99	73.74
AE-4B	77.50		34-44																			73.42	70.51	73.30	72.28	73.61	73.01	71.10	72.18	70.58	72.12	70.26	70.55	72.92	73.83
FPC-2A	78.40		6-16											75.69	76.70	76.98	NR		76.66	78.40	76.24	76.31	75.66	76.32	75.90	76.30	76.12	75.62	75.98	75.41	75.89	75.02	75.36	75.39	75.86
FPC-2B	77.98		22.5-37.5											77.47	77.30	77.71	77.78		77.38	76.37	76.81	77.28	76.45	77.30	76.90	77.46	77.26	76.45	74.94	76.51	75.22	76.24	75.18	77.00	77.45
FPC-3A	73.17		62-72	70.91							70.91																								71.02
FPC-3B	72.22		80.5-95.5	71.27							70.97																								70.42
FPC-3C	72.36		19.5-28.5	71.16							70.86																								71.03
FPC-4B	75.83		18-33	71.83																	69.96	71.58	68.21	71.63	70.95	71.81	71.24	69.80	71.01	69.51	70.43	68.98	69.76	71.15	71.95
FPC-5A	74.30		54-64	75.01	74.44	74.44	73.94		74.44	73.29	74.14	72.2	73.93	73.9	73.98	74.18	74.14	73.02	73.10	73.03	73.10	74.30	72.18	73.50	73.50	73.73	73.37	72.73	72.91	72.05	72.11			NM	NM
FPC-5B	74.90		95-110	74.85	74.81	74.81	73.91	74.21	74.81	73.3	74.6	72.38	74.48	74.25	74.60	74.77	74.70	73.43	70.96	73.15	74.23	74.40	73.19	74.66	74.50	74.85	74.46	73.74	74.33	72.95	73.64	72.90	73.39	74.05	74.35
FPC-6A (Note 5)	79.20		3.5-4.5	73.23							72.74		72.84	72.85	72.85	73.11	73.01		72.65			75.03	72.91	75.03	74.58	75.22	74.42	70.88	71.87	70.77	71.22	70.12	70.52	72.18	72.71
FPC-6B	77.10		13-28	73.20							72.81	69.86	72.94		72.09	73.21	73.14	70.88	72.33	70.30	71.94	70.32	68.37	70.47	70.19	72.93	72.35	71.26	72.35	71.06	71.60	70.49	71.24	72.65	73.18
FPC-7A	82.08		16.7-21.7	81.63							81.36										80.12	80.99	80.03	81.46	81.30	81.49	81.16	80.39	81.10	80.20	80.73	79.78	80.46	81.17	81.44
FPC-7B	82.33		29.8-44.8	80.53							80.93										79.82	80.72	79.69	81.02	79.43	81.20	80.87	80.14	80.82	79.95	80.42	79.54	80.20	80.94	81.42
FPC-8A	73.80		23-33	73.85	73.67	73.65	71.49	73.15	73.49	71.01	73.04	69.23	72.93	72.93	72.88	73.34	73.20	71.06	72.99	70.36	71.26	72.86	70.63	73.01	72.20	73.09	72.73	71.62	72.46	71.31	72.60	70.75	71.32	72.75	73.17
FPC-8B	73.60		40-55	72.83	73.52	73.49	71.44	73.04	73.33	70.84	72.88	69.14	72.77	72.78	72.63	73.18	72.99	70.93	72.79	70.07	71.22	72.69	70.58	72.83	72.03	72.00	72.68	71.10	72.28	71.16	72.40	70.61	71.19	72.59	72.96
FPC-9A	117.57		58-68	99.87							97.32	95.02	95.72	96.92	96.75	95.90	99.22	96.25	97.05	96.02	96.27	96.40	95.83	97.59	95.48	97.44	97.90	96.37	96.58	96.18	97.23	95.98	96.18	97.20	99.10
FPC-9B	117.87		72-87	99.99							97.81	95.07	95.79	96.98	96.83	95.99	99.28	96.15	97.08	96.11	96.37				95.14	97.41	97.93	96.42	96.96	96.21	97.22	96.03	96.18	97.18	99.13
FPC-9C	117.75		15-25	100.45							97.87	95.77	96.33		97.25	96.50	99.62		97.52		96.75				96.08	97.62	98.10	96.75	96.65	96.78	97.69	96.53	96.84	97.58	99.25
FPC-11A	117.95		47-52	100.4							97.7										96.65	97.01	96.51	97.71	95.81	97.58	97.95	96.50	96.68	96.38	97.45	96.09	96.36	97.24	99.14
FPC-11B	117.90		58-73	96.5							97.74										96.70	96.90	96.34	97.69	95.54	97.57	97.89	96.56	97.10	96.37	97.30	96.07	96.29	97.19	99.13
FPC-11C (Note 6)	118.10		18-33																											96.58	97.44	96.23	96.82	97.39	99.38
GZ-105	73.60	70.87	35-50	66.42							70.86	67.46	70.77	70.78	69.82	71.16	71.02	69.31	70.83	68.45	69.71	71.09	69.28	70.91	70.68	71.05	70.78	69.83	70.71	69.47	70.70	68.98	70.03	70.69	71.08
GZ-123	87.49		9.5-16.5																						76.91	77.90	78.28	77.05	77.42	77.01	77.24	76.76	77.36	77.61	79.53
GZ-125	88.77		57-200																						80.35	81.73	81.87	80.36	80.32	80.07	80.79	79.76	80.03	80.89	82.93

NOTES:

1. Shaded data denotes a bedrock monitoring well.
2. A blank indicates data was not collected.
3. GW.EL. indicates groundwater elevation and FT. indicates measurements were in feet.
4. Summit determined that Reference Point Elevations for MW-5S, MW-5D, MW-8 and OP-2 were incorrect for data collected since 1999. Correct measuring point elevations were identified on an as built survey plan prepared by Richard D. Bartlett and Associates, Inc. dated September 1998. Surveyed "top of cap" elevations for MW-5S, MW-5D and MW-8 were adjusted to top of PVC using field measurements (significant settling is not likely at these wells as they are 2-inch diameter wells install in 6 inch diameter boreholes through 6-inch diameter metal casings. A PVC casing elevation was listed for OP-2. Groundwater elevation data since April 1999 adjustments are as follows: MW-5S (+3.54 ft), MW-5D (+1.33 ft), MW-8 (-0.28 ft) and OP-2 (+1.51 ft).
5. A replacement well (point) for FPC-6A was installed in August 2003, due to insufficient water for sampling for extended periods of time. However, the reference point elevation was not updated at that time. Therefore, groundwater elevations presented in previous monitoring reports for FPC-6A since August 2003 were incorrect. Summit surveyed the FPC-6A reference point elevation in December 2013 relative to the FPC-6B reference point elevation and determined that the measure point elevation for FPC-6A is 79.20 feet (not 77.00 feet, as identifed in previous reports). Groundwater elevations at FPC-6A since August 2004 were corrected by +2.20 feet. In addition, the FPC-6A screened interval was updated based on well depth (9.97 feet), stickup (5.54 feet), and an assumed 1 foot screen interval.
6. FPC-11C: Well casing was modified during road box repairs at FPC-11A/B/C on 1/10/2014 (Summit Environmental Consultants). Top of PVC casing was resurveyed relative to FPC-11A/B measuring points on 2/27/2014. New measuring point elevation is 118.10. Original measuring point elevation was 118.04 feet.

TABLE 2

Summary of May/June 2017 Groundwater Analytical Data

Coakley Landfill Superfund Site - North Hampton and Greenland, New Hampshire

OPERABLE UNIT 1 (OU-1)																
Sampling Point ID			MW-4	MW-4-DUP	MW-5D	MW-5S	MW-6	MW-8	MW-9	MW-10	MW-11	OP-2	OP-5	BP-4	# of Exceedances	
Monitored Zone / Unit	EPA	NHDES	Till	Till	DBR	SBR	OBH-BR	SBR	Outwash	Outwash	SBR	Outwash	Outwash	OBH-BR	EPA	NHDES
Date of Sample Collection	CL	AGQS	5/1/17	5/1/17	4/27/17	4/27/17	4/27/17	4/25/17	4/25/17	4/28/17	5/1/17	5/1/17	4/27/17	4/26/17	CL	AGQS
VOLATILE ORGANIC COMPOUNDS BY 8260B - (ug/L)																
1,2,4-Trimethylbenzene	---	330	N/A	N/A	1 U	1 U	1 U	1 U	N/A	N/A	1 U	N/A	N/A	N/A	---	0
1,2-Dichloropropane	5	5	N/A	N/A	2 U	2 U	2 U	2 U	N/A	N/A	2 U	N/A	N/A	N/A	0	0
1,4-Dichlorobenzene	---	75	N/A	N/A	1 U	1	1 U	1 U	N/A	N/A	1 U	N/A	N/A	N/A	---	0
2-Butanone(MEK)	200	4000	N/A	N/A	10 U	10 U	10 U	10 U	N/A	N/A	10 U	N/A	N/A	N/A	0	0
Benzene	5	5	N/A	N/A	2	2	1 U	2	N/A	N/A	2	N/A	N/A	N/A	0	0
Chlorobenzene	100	100	N/A	N/A	2	1	2 U	3	N/A	N/A	2 U	N/A	N/A	N/A	0	0
Chloroethane	---	---	N/A	N/A	40	5 U	5 U	14 J+	N/A	N/A	14	N/A	N/A	N/A	---	---
Diethyl Ether	---	1400	N/A	N/A	110	24	5 U	65	N/A	N/A	15	N/A	N/A	N/A	---	0
IsoPropylbenzene	---	800	N/A	N/A	1 U	1	1 U	1 U	N/A	N/A	1 U	N/A	N/A	N/A	---	0
Methyl-t-butyl ether(MTBE)	---	13	N/A	N/A	5 U	5 U	5 U	5 U	N/A	N/A	5 U	N/A	N/A	N/A	---	0
m&p-Xylene	---	10000^	N/A	N/A	1 U	1 U	1 U	1 U	N/A	N/A	2	N/A	N/A	N/A	---	0
o-Xylene	---	10000^	N/A	N/A	1 U	1 U	1 U	1 U	N/A	N/A	1 U	N/A	N/A	N/A	---	0
tert-Butyl Alcohol (TBA)	---	40	N/A	N/A	40	30 U	30 U	50	N/A	N/A	30 UJ	N/A	N/A	N/A	---	1
Tetrachloroethene	3.5	5	N/A	N/A	2 U	2 U	2 U	2U	N/A	N/A	2 U	N/A	N/A	N/A	0	0
Tetrahydrofuran(THF)	154	600	N/A	N/A	80	10	10 U	110	N/A	N/A	10	N/A	N/A	N/A	0	0
trans-1,2-Dichloroethene	100	100	N/A	N/A	2 U	2 U	2 U	2 U	N/A	N/A	2 U	N/A	N/A	N/A	0	0
1,4-DIOXANE BY 8260B SIM - (ug/L)																
1,4-Dioxane	3	3	**4.6**	**4.6**	**110**	**30**	0.25U	**150**	0.25U	0.25U	**27**	0.66	0.25U	**7.5**	7	7
DISSOLVED METALS BY 200.8 - (mg/L)																
Dissolved Antimony	0.006	0.006	0.001 U	0.001 U	N/A	N/A	N/A	N/A	0.001 U	0.001 U	N/A	0.001 U	0.001 U	N/A	0	0
Dissolved Arsenic	0.01	0.01	**0.046**	**0.042**	N/A	N/A	N/A	N/A	0.001U	0.001U	N/A	**0.15**	**0.023**	N/A	4	4
Dissolved Barium	---	2	0.076	0.067	N/A	N/A	N/A	N/A	0.012	0.011	N/A	0.01	0.016	N/A	---	0
Dissolved Beryllium	0.004	0.004	0.001 U	0.001 U	N/A	N/A	N/A	N/A	0.001 U	0.001 U	N/A	0.001 U	0.001 U	N/A	0	0
Dissolved Calcium	---	---	68	60	N/A	N/A	N/A	N/A	18	12	N/A	35	12	N/A	---	---
Dissolved Chromium	0.05	0.1	0.001 U	0.001 U	N/A	N/A	N/A	N/A	0.001U	0.001 U	N/A	0.001 U	0.001 U	N/A	0	0
Dissolved Iron	---	---	26	23	N/A	N/A	N/A	N/A	0.05U	0.4	N/A	51	11	N/A	---	---
Dissolved Lead	0.015	0.015	0.001 U	0.001 U	N/A	N/A	N/A	N/A	0.001 U	0.001 U	N/A	0.001 U	0.001 U	N/A	0	0
Dissolved Magnesium	---	---	22	19	N/A	N/A	N/A	N/A	3.5	2.5	N/A	7.2	3.1	N/A	---	---
Dissolved Manganese	0.3	0.84	**1.2**	**1.1**	N/A	N/A	N/A	N/A	0.083	0.14	N/A	**2**	**2.6**	N/A	4	4
Dissolved Nickel	0.1	0.1	0.009	0.008	N/A	N/A	N/A	N/A	0.003	0.002	N/A	0.008	0.034	N/A	0	0
Dissolved Potassium	---	---	35	32	N/A	N/A	N/A	N/A	1.6	3.1	N/A	9.7	2.6	N/A	---	---
Dissolved Sodium	---	---	37	34	N/A	N/A	N/A	N/A	7	20	N/A	14	9	N/A	---	---
Dissolved Vanadium	0.26	---	0.005 U	0.005 U	N/A	N/A	N/A	N/A	0.005 U	0.005 U	N/A	0.005 U	0.005 U	N/A	0	---
TOTAL METALS BY 200.8																
Total Antimony	0.006	0.006	N/A	N/A	0.001 U	0.001 U	0.001 U	0.001 U	N/A	N/A	0.001 U	N/A	N/A	0.001 U	0	0
Total Arsenic	0.01	0.01	N/A	N/A	0.0009	**0.02**	0.001 U	0.007	N/A	N/A	**0.013**	N/A	N/A	**0.039**	3	3
Total Barium	---	2	N/A	N/A	0.097	0.13	0.002	0.17	N/A	N/A	0.067	N/A	N/A	0.042	---	0
Total Beryllium	0.004	0.004	N/A	N/A	0.001 U	0.001 U	0.001 U	0.001 U	N/A	N/A	0.001 U	N/A	N/A	0.001 U	0	0
Total Calcium	---	---	N/A	N/A	34	33	21	30	N/A	N/A	19	N/A	N/A	48	---	---
Total Chromium	0.05	0.1	N/A	N/A	0.001 U	0.001 U	0.001 U	0.002	N/A	N/A	0.001 U	N/A	N/A	0.001 U	0	0
Total Iron	---	---	N/A	N/A	15	13	0.75	3.3	N/A	N/A	12	N/A	N/A	16	---	---
Total Lead	0.015	0.015	N/A	N/A	0.001 U	0.001 U	0.001 U	0.001 U	N/A	N/A	0.001 U	N/A	N/A	0.001 U	0	0
Total Magnesium	---	---	N/A	N/A	30	17	8.2	34	N/A	N/A	14	N/A	N/A	19	---	---
Total Manganese	0.3	0.84	N/A	N/A	**0.8**	**2.9**	**0.84**	**1.3**	N/A	N/A	**0.49**	N/A	N/A	**1.2**	6	3
Total Nickel	0.1	0.1	N/A	N/A	0.013	0.008	0.002	0.021	N/A	N/A	0.008	N/A	N/A	0.008	0	0
Total Potassium	---	---	N/A	N/A	22	19	2.4	12	N/A	N/A	10	N/A	N/A	16	---	---
Total Sodium	---	---	N/A	N/A	130	72	19	170	N/A	N/A	70	N/A	N/A	51	---	---
Total Vanadium	0.26	---	N/A	N/A	0.005 U	0.005 U	0.005 U	0.005 U	N/A	N/A	0.005 U	N/A	N/A	0.005 U	0	---
Hexavalent Chromium by 7196A																
Hexavalent Chromium	---	---	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0	---
PERFLUORINATED CHEMICALS BY MODIFIED 537 - (ng/L)																
Perfluorobutanesulfonic acid (PFBS)	---	---	8.41J	7.82J	29.2	9.6J	2.10U	29.6	2.06U	2.22U	10.7J	2.16U	2.21U	2.34J	---	---
Perfluoroheptanoic acid (PFHpA)	---	---	707	709	47.8	44.8	4.95J	194	135	54.6	401	41.1	2.61U	27.4	---	---
Perfluorohexanesulfonic acid (PFHxS)	---	---	35.7	31.3	49	71.1	1.12U	120	12.0J	7.09J	68.8	6.01J	1.18U	10.3J	---	---
Perfluorooctanoic acid (PFOA)	70	70	**1240D**	**1050D**	**119**	**849D**	11.4J	**435**	**386**	**186**	**799D**	**87.1**	1.86J	62.3	5	5
Perfluorononanoic acid (PFNA)	---	---	59.8	54.5	2.03U	50.9	2.00U	5.85J	128	44.6	73.4	6.34J	2.11U	2.03U	---	---
Perfluorooctanesulfonic (PFOS)	70	70	55.8	60.6	23.9	**89.5**	3.79J	**224J+**	**429**	**105**	**318**	12.7J	1.05U	7.97J	4	4
Combination of PFOA and PFOS	70	70	**1295.8**	**1110.6**	**142.9**	**938.5**	15.19	**659**	**815**	**291**	**1117**	**99.8**	1.86	**70.27**	10	10
FIELD PARAMETERS																
Dissolved Oxygen (mg/l)	---	---	N/A	N/A	0.9	0.9	0.8	0.6	1.2	3	0.6	0.5	0.8	0.6	---	---
Oxidation Reduction Potential (mV)	---	---	N/A	N/A	-143	-129	156	-94	170	45	-122	-76	26	-104	---	---
pH (standard units)	---	---	N/A	N/A	7.2	7.0	5.9	7.5	6.2	6.5	7.1	6.4	5.8	6.8	---	---
Specific Conductance (us/cm)	---	---	N/A	N/A	1383	834	304	1264	149	193	611	572	195	863	---	---
Temperature (degrees Celcius)	---	---	N/A	N/A	9	10	10	8	6	10	8	7	8	10	---	---
Turbidity (NTU)	---	---	N/A	N/A	<5	<5	11	7	<5	<5	<5	<5	<5	<5	---	---

TABLE 2

Summary of April/May 2017 Groundwater Analytical Data

Coakley Landfill Superfund Site - North Hampton and Greenland, New Hampshire

			OPERABLE UNIT 2 (OU-2)																									
Sampling Point ID			AE-1A	AE-1B	AE-2A	AE-2B	AE-3A	AE-3A-DUP	AE-3B	AE-4A	AE-4B	FPC-3A	FPC-3B	FPC-3C	FPC-4B	FPC-5B	FPC-6A	FPC-6B	FPC-7A	FPC-7B	FPC-8A	FPC-8B	FPC-9A	FPC-11A	FPC-11B	GZ-105	GZ-105-DUP	# of Exceedances	
Monitored Unit	EPA	NHDES	Till	SBR	Till	SBR	Till	Till	SBR	Till	SBR	Till	SBR	Outwash	SBR	SBR	Till	SBR	Till	SBR	Till	SBR	Till	Till	Till	SBR	SBR	EPA	NHDES
Date of Sample Collection	CL	AGQS	5/1/17	5/1/17	4/27/17	4/26/17	4/25/17	4/25/17	4/26/17	5/1/17	4/26/17	5/1/17	5/1/17	5/1/17	5/1/17	4/28/17	4/26/17	4/26/17	4/26/17	4/26/17	4/27/17	4/27/17	5/1/17	4/28/17	4/28/17	5/1/17	5/1/17	CL	AGQS
VOLATILE ORGANIC COMPOUNDS BY 8260B - (ug/L)																													
1,2,4-Trimethylbenzene	---	330	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	N/A	1 U	1 U	N/A	N/A	1 U	1 U	N/A	N/A	N/A	1 U	1 U	---	0
1,2-Dichloropropane	5	5	N/A	N/A	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	N/A	2 U	2 U	N/A	N/A	2 U	2 U	N/A	N/A	N/A	2 U	2 U	0	0
1,4-Dichlorobenzene	---	75	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	N/A	1U	1 U	N/A	N/A	1 U	1 U	N/A	N/A	N/A	3	2	---	0
2-Butanone(MEK)	200	4000	N/A	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	N/A	10 U	10 U	N/A	N/A	10 U	10 U	N/A	N/A	N/A	10 U	10 U	0	0
Benzene	5	5	N/A	N/A	1 U	1U	1	1	1	1U	1 U	1 U	1 U	1 U	1 U	N/A	1U	1 U	N/A	N/A	1 U	1 U	N/A	N/A	N/A	4	4	0	0
Chlorobenzene	100	100	N/A	N/A	2U	2 U	5	5	5	2U	2 U	2 U	2 U	2 U	2 U	N/A	2	1	N/A	N/A	2 U	2 U	N/A	N/A	N/A	6	6	0	0
Chloroethane	---	---	N/A	N/A	5 U	5U	6 J+	6	6	5U	5 U	5 U	5 U	5 U	5 U	N/A	5 U	5 U	N/A	N/A	5 U	5 U	N/A	N/A	N/A	7	7	---	---
Diethyl Ether	---	1400	N/A	N/A	5U	14	11	11	11	5U	5 U	5 U	5 U	5 U	5 U	N/A	6	7	N/A	N/A	5 U	5 U	N/A	N/A	N/A	42	42	---	0
IsoPropylbenzene	---	800	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	N/A	1 U	1 U	N/A	N/A	1 U	1 U	N/A	N/A	N/A	1	1	---	0
Methyl-t-butyl ether(MTBE)	---	13	N/A	N/A	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	N/A	5 U	5 U	N/A	N/A	5 U	5 U	N/A	N/A	N/A	5 U	5 U	---	0
m&p-Xylene	---	10000^	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	N/A	1 U	1 U	N/A	N/A	1 U	1 U	N/A	N/A	N/A	1 U	1 U	---	0
o-Xylene	---	10000^	N/A	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	N/A	1 U	1 U	N/A	N/A	1 U	1 U	N/A	N/A	N/A	1 U	1 U	---	0
tert-Butyl Alcohol (TBA)	---	40	N/A	N/A	30 U	30 U	30 U	30 U	30 U	30 UJ	30 U	30 UJ	30 UJ	30 UJ	30 UJ	N/A	30 U	30 U	N/A	N/A	30 U	30 U	N/A	N/A	N/A	30 U	30 U	---	0
Tetrachloroethene	3.5	5	N/A	N/A	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	N/A	2 U	2 U	N/A	N/A	2 U	2 U	N/A	N/A	N/A	2 U	2 U	0	0
Tetrahydrofuran(THF)	154	600	N/A	N/A	10 U	20	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	N/A	10 U	10 U	N/A	N/A	10 U	10 U	N/A	N/A	N/A	30 J	30 J	0	0
trans-1,2-Dichloroethene	100	100	N/A	N/A	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	N/A	2 U	2 U	N/A	N/A	2 U	2 U	N/A	N/A	N/A	2 U	2 U	0	0
1,4-DIOXANE BY 8260B SIM - (ug/L)																													
1,4-Dioxane	3	3	0.88	0.97	**5.9**	**58**	**14**	**16**	**15**	0.25U	0.25U	0.25U	0.25U	0.48	0.25U	**40**	**8**	**7.1**	0.25U	0.25U	0.48	0.49	**14**	0.93	0.55	**65**	**67**	11	11
DISSOLVED METALS BY 200.8 - (mg/L)																													
Dissolved Antimony	0.006	0.006	0.001 U	N/A	0.001 U	N/A	0.001 U	0.001 U	N/A	0.001 U	N/A	N/A	N/A	N/A	N/A	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	0.001 U	N/A	N/A	N/A	0	0
Dissolved Arsenic	0.01	0.01	**0.017**	N/A	**0.13**	N/A	**0.093**	**0.09**	N/A	0.001 U	N/A	N/A	N/A	N/A	N/A	N/A	0.005	N/A	0.001 U	N/A	0.001U	N/A	**0.047**	**0.019**	N/A	N/A	N/A	6	6
Dissolved Barium	---	2	0.017	N/A	0.027	N/A	0.06	0.059	N/A	0.005	N/A	N/A	N/A	N/A	N/A	N/A	0.022	N/A	0.004	N/A	0.006	N/A	0.1	0.038	N/A	N/A	N/A	---	0
Dissolved Beryllium	0.004	0.004	0.001 U	N/A	0.001 U	N/A	0.001 U	0.001U	N/A	0.001 U	N/A	N/A	N/A	N/A	N/A	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	0.001 U	N/A	N/A	N/A	0	0
Dissolved Calcium	---	---	33	N/A	30	N/A	40	40	N/A	6.7	N/A	N/A	N/A	N/A	N/A	N/A	21	N/A	13	N/A	22	N/A	54	55	N/A	N/A	N/A	---	---
Dissolved Chromium	0.05	0.1	0.001 U	N/A	0.001 U	N/A	0.001 U	0.001U	N/A	0.001 U	N/A	N/A	N/A	N/A	N/A	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	0.001 U	N/A	N/A	N/A	0	0
Dissolved Iron	---	---	0.38	N/A	23	N/A	22	22	N/A	0.05U	N/A	N/A	N/A	N/A	N/A	N/A	0.41	N/A	0.05 U	N/A	0.05U	N/A	7.7	0.77	N/A	N/A	N/A	---	---
Dissolved Lead	0.015	0.015	0.001 U	N/A	0.001 U	N/A	0.001 U	0.001 U	N/A	0.001 U	N/A	N/A	N/A	N/A	N/A	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	0.001 U	N/A	N/A	N/A	0	0
Dissolved Magnesium	---	---	12	N/A	9	N/A	17	18	N/A	5.8	N/A	N/A	N/A	N/A	N/A	N/A	8.8	N/A	4	N/A	4.5	N/A	29	18	N/A	N/A	N/A	---	---
Dissolved Manganese	0.3	0.84	**0.48**	N/A	**1.1**	N/A	**1.2**	**1.2**	N/A	0.035	N/A	N/A	N/A	N/A	N/A	N/A	**1.1**	N/A	0.005 U	N/A	0.005U	N/A	0.21	**0.37**	N/A	N/A	N/A	6	4
Dissolved Nickel	0.1	0.1	0.001 U	N/A	0.008	N/A	0.006	0.006	N/A	0.001U	N/A	N/A	N/A	N/A	N/A	N/A	0.005	N/A	0.004	N/A	0.001U	N/A	0.004	0.001U	N/A	N/A	N/A	0	0
Dissolved Potassium	---	---	3.9	N/A	15	N/A	16	16	N/A	2.4	N/A	N/A	N/A	N/A	N/A	N/A	5.9	N/A	2.1	N/A	2.7	N/A	11	6.3	N/A	N/A	N/A	---	---
Dissolved Sodium	---	---	21	N/A	33	N/A	58	59	N/A	7	N/A	N/A	N/A	N/A	N/A	N/A	49	N/A	9	N/A	17	N/A	89	120	N/A	N/A	N/A	---	---
Dissolved Vanadium	0.26	---	0.005 U	N/A	0.005 U	N/A	0.005 U	0.005 U	N/A	0.005 U	N/A	N/A	N/A	N/A	N/A	N/A	0.005 U	N/A	0.005 U	N/A	0.005 U	N/A	0.005 U	0.005 U	N/A	N/A	N/A	0	---
TOTAL METALS BY 200.8																													
Total Antimony	0.006	0.006	N/A	0.001 U	N/A	0.001 U	N/A	N/A	0.001 U	N/A	0.001 U	0.001U	0.001U	0.001U	0.001 U	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	0.001 U	N/A	N/A	0.001 U	0.001 U	0.001 U	0	0
Total Arsenic	0.01	0.01	N/A	0.008	N/A	0.004	N/A	N/A	**0.076**	N/A	0.001 U	0.008	0.003	**0.013**	0.001 U	0.003	N/A	0.001	N/A	0.001 U	N/A	0.007	N/A	N/A	0.002	**0.014**	**0.013**	4	4
Total Barium	---	2	N/A	0.039	N/A	0.08	N/A	N/A	0.15	N/A	0.009	0.004	0.004	0.006	0.003	0.038	N/A	0.043	N/A	0.003	N/A	0.007	N/A	N/A	0.03	0.044	0.042	---	0
Total Beryllium	0.004	0.004	N/A	0.001 U	N/A	0.001 U	N/A	N/A	0.001 U	N/A	0.001 U	0.001U	0.001U	0.001U	0.001 U	0.001 U	N/A	0.001U	N/A	0.001 U	N/A	0.001 U	N/A	N/A	0.001 U	0.001 U	0.001 U	0	0
Total Calcium	---	---	N/A	31	N/A	40	N/A	N/A	41	N/A	9	3.7	2.1	24	3.6	5.4	N/A	9.2	N/A	17	N/A	21	N/A	N/A	28	50	47	---	---
Total Chromium	0.05	0.1	N/A	0.001 U	N/A	0.001 U	N/A	N/A	0.001 U	N/A	0.001 U	0.001U	0.001U	0.001U	0.001 U	0.001 U	N/A	0.001 U	N/A	0.001U	N/A	0.001 U	N/A	N/A	0.001 U	0.001 U	0.001 U	0	0
Total Iron	---	---	N/A	2.5	N/A	2	N/A	N/A	17	N/A	0.05 U	0.29	0.05U	0.1	0.05 U	0.22	N/A	4.1	N/A	0.05 U	N/A	0.07	N/A	N/A	0.79	3.8	3.5	---	---
Total Lead	0.015	0.015	N/A	0.001U	N/A	0.001 U	N/A	N/A	0.001 U	N/A	0.001 U	0.001U	0.001U	0.001U	0.001 U	0.001 U	N/A	0.001 U	N/A	0.001U	N/A	0.004	N/A	N/A	0.001 U	0.001 U	0.001 U	0	0
Total Magnesium	---	---	N/A	14	N/A	27	N/A	N/A	18	N/A	7.1	0.73	0.83	6.7	2.4	3.3	N/A	5.2	N/A	4.8	N/A	4.5	N/A	N/A	7.9	19	18	---	---
Total Manganese	0.3	0.84	N/A	**0.57**	N/A	**1.1**	N/A	N/A	**1.8**	N/A	0.005 U	0.01	0.013	0.13	0.005 U	0.059	N/A	**0.45**	N/A	0.005 U	N/A	0.016	N/A	N/A	0.27	**0.42**	**0.39**	6	2
Total Nickel	0.1	0.1	N/A	0.001U	N/A	0.008	N/A	N/A	0.006	N/A	0.003	0.001U	0.001U	0.001U	0.001 U	0.007	N/A	0.004	N/A	0.01	N/A	0.001 U	N/A	N/A	0.002	0.007	0.007	0	0
Total Potassium	---	---	N/A	5.8	N/A	11	N/A	N/A	17	N/A	4.2	4	2.1	2.8	1.5	6.4	N/A	5.1	N/A	2.1	N/A	3.1	N/A	N/A	6.6	6.3	6.1	---	---
Total Sodium	---	---	N/A	25	N/A	150	N/A	N/A	64	N/A	18	63	65	12	5	220	N/A	58	N/A	10	N/A	18	N/A	N/A	260	130	130	---	---
Total Vanadium	0.26	---	N/A	0.005 U	N/A	0.005 U	N/A	N/A	0.005 U	N/A	0.005 U	0.005U	0.005U	0.005U	0.005 U	0.005 U	N/A	0.005 U	N/A	0.005 U	N/A	0.005 U	N/A	N/A	0.005U	0.005 U	0.005 U	0	---
Hexavalent Chromium by 7196A																													
Hexavalent Chromium	---	---	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	---	---
PERFLUORINATED CHEMICALS BY MODIFIED 537 - (ng/L)																													
Perfluorobutanesulfonic acid (PFBS)	---	---	2.03U	2.18U	5.29J	16.2J	4.17J	4.44J	5.18J	2.13U	2.05U	2.01U	2.01U	2.07U	2.08U	13.2J	3.33J	2.40J	4.06J	3.31J	2.10U	2.15U	5.78J	2.12U	2.18U	13.4J	14.9J	---	---
Perfluoroheptanoic acid (PFHpA)	---	---	2.39U	2.57U	363	387	122	121	142	2.52U	2.42U	2.37U	2.37U	2.44U	2.45U	27.9	27.6	21.9	2.49U	2.42U	4.67J	2.54U	29.5	4.88J	2.82J	123	140	---	---
Perfluorohexanesulfonic acid (PFHxS)	---	---	2.02J	2.05J	31.2	103	16.8J	17.9J	19.6J	1.14U	1.09U	1.07U	1.07U	1.10U	1.11U	41.4	11.0J	8.49J	1.13U	1.09U	2.54J	1.76J	18.0J	5.88J	2.85J	66.4	64.1	---	---
Perfluorooctanoic acid (PFOA)	70	70	5.48J	7.38J	**827**	**902**	**387**	**339**	**384**	1.12U	1.07U	1.05U	1.05U	1.08U	1.09U	**192**	**93.3**	**80.4**	5.64J	5.56J	10.3J	3.96J	**111**	24.9	14.0J	**340**	**425**	11	11
Perfluorononanoic acid (PFNA)	---	---	1.93U	2.07U	93.5	73.2	54.1	45.1	50.9	2.03U	1.95U	1.92U	1.92U	1.97U	1.98U	2.12U	4.05J	2.93J	2.01U	1.95U	2.00U	2.05U	2.18U	2.02U	2.08U	19.8	23.4	---	---
Perfluorooctanesulfonic (PFOS)	70	70	1.78J	3.01J	**297**	**456**	**91.9**	**87.6**	**90.9**	1.02U	0.98U	0.96U	0.98U	0.99U	0.99U	30.1	18.9J	13.0J	1.88J	1.35J	2.84J	2.53J	20.9J	1.60J	3.77J	**163**	**211**	7	7
Combination of PFOA and PFOS	70	70	7.26	10.39	**1124**	**1358**	**478.9**	**426.6**	**474.9**	ND	ND	ND	ND	ND	ND	**222.1**	**112.2**	**93.4**	7.52	6.91	13.14	6.49	**131.9**	26.5	17.77	**503**	**636**	11	11
FIELD PARAMETERS																													
Dissolved Oxygen (mg/l)	---	---	N/A	N/A	1.1	2.0	0.7	N/A	0.7	2.0	5.6	0.8	1.4	0.6	10.0	0.7	0.7	1.6	5.3	3.8	1.9	0.7	0.5	0.8	1.0	2.5	N/A	---	---
Oxidation Reduction Potential (mV)	---	---	N/A	N/A	-83	-77	-84	N/A	-92	148	134	-158	-111	-177	139	-164	-32	-73	142	161	132	-128	-120	-98	-173	-136	N/A	---	---
pH (standard units)	---	---	N/A	N/A	6.7	7.3	6.8	N/A	6.8	6.6	7.0	9.4	8.9	8.3	6.6	8.0	7.0	6.9	5.3	6.5	6.5	8.0	7.2	7.4	8.0	7.4	N/A	---	---
Specific Conductance (us/cm)	---	---	N/A	N/A	476	970	870	N/A	881	125	175	294	296	239	71	1135	444	325	160	191	215	200	998	1053	1551	885	N/A	---	---
Temperature (degrees Celcius)	---	---	N/A	N/A	9	9	7	N/A	8	7	9	8	8	8	8	9	8	8	9	9	10	10	8	11	11	8	N/A	---	---
Turbidity (NTU)	---	---	N/A	N/A	<5	<5	<5	N/A	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	N/A	---	---

Notes on Last Page of Table

TABLE 2

Summary of 2016 Groundwater Analytical Data

Coakley Landfill Superfund Site - North Hampton and Greenland, New Hampshire

NOTES

1. Monitored Zone / Unit identifies the hydrogeological unit within the screened/open interval. The hydrogeology of the site is comprised of four principle geological units include including bedrock, glacial till, marine sediments consisting of predominately of silt and clay, and sandy outwash. Bedrock well screened intervals vary as follows: "OBH-BR" wells are standard 6-inch diameter wells with steel casing set in bedrock and open boreholes (typical water supply well construction). "SBR" indicates the screen interval is the upper most section of bedrock. "DBR" is used to differentiate a screened interval that is below the uppermost section of bedrock (i.e.; MW-5S versus MW-5D).
2. **Bolded values** denote concentration exceeding the EPA Interim Cleanup Level (ICL)
3. Shaded values denote concentration exceeding the NHDES Ambient Groundwater Quality Standard
4. The list of volatile organic compounds (VOCs) provided includes analytes detected in OU-1 or OU-2 since 2006, and all VOCs that have ICLs. ICLs were established for 1,2-dichloropropane and tetrachloroethylene (PCE), however, no detections have been reported at groundwater sampling points included in the long-term monitoring events since 1998. An ICL was established for trans-1,2-dichloroethene however no detections have been reported at groundwater sampling points included in the long-term monitoring events since 1999.
5. An ICL was established for the semi-volatile organic compounds (SVOCs) diethyl phthalate and phenol. However, in May 1998 and April 1999, groundwater samples were submitted for analysis of SVOCs and no exceedances were reported; therefore, SVOCs were removed from the long-term monitoring plan.
6. Result for groundwater primary/duplicate samples are provided in this table: MW-4/MW-4-DUP, AE-3A/AE-3A-DUP, and GZ-105/GZ-105-DUP.

ABBREVIATIONS

N/A	Sample was not analyzed/measured for indicated parameter
#.## U	Not Detected at the reporting detection limit indicated
NHDES AGQS	NH Department of Environmental Services Ambient Groundwater Quality Standard (Env-Or-600, Table 600-1)
EPA CL	US Environmental Protection Agency Cleanup Level established in 2015 Fifth Explanation of Significant Difference. Cleanup Levels were historically called Interium Cleanup Levels.
uS/cm	microsiemens per centimeter
ug/L	micrograms per liter, parts per billion
mg/L	milligram per liter, parts per million
ng/L	nanograms per liter, parts per
NTU	nephelometric turbidity unit
mV	millivolt
*	Field parameter result qualified due to failed QA/QC or suspected issues with measurements, as noted on field forms and
^	The AGQS for xylenes is for total xylene or the sum of all isomers, including: m&p-Xylene and o-Xylene.

TABLE 3
Summary of Surface Water Analytical Data for Spring 2017
Coakley Landfill Superfund Site - North Hampton Greenland, New Hampshire

SAMPLE IDENTIFICATION	NHDES Surface Water Standard		SW-4	SW-5	SW-5Dup	SW-103	SW-110	SW-111	SW-LR	SW-BB1	SW-BB2
DATE SAMPLED	Acute	Chronic	2-May-17	2-May-17	2-May-17	25-Apr-17	25-Apr-17	2-May-17	2-May-17	2-May-17	2-May-17
VOLATILE ORGANIC COMPOUNDS BY 8260B (ug/L)											
Toluene	---	---	1U	1U	1U	1U	1U	1U	1U	1U	1U
METALS BY 200.8 (mg/L)											
TOTAL OR DISSOLVED (METALS ONLY)			**Dissolved**	**Dissolved**	**Dissolved**	**Dissolved**	**Dissolved**	**Dissolved**	**Dissolved**	**Dissolved**	**Dissolved**
Aluminum	0.75	0.087	0.1	0.05U	0.05U	0.05U	0.05U	0.08	0.33	0.05U	0.05U
Antimony	9	1.6	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U
Arsenic*	0.34	0.15	0.001	0.001	0.001	0.001U	0.001U	0.001U	0.001	0.001	0.001
Barium	---	---	0.006	0.009	0.009	0.012	0.009	0.007	0.006	0.016	0.013
Beryllium	0.13	0.0053	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U
Cadmium*	0.00095	0.0008	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U
Calcium	---	---	11	21	21	21	16	9.3	6.5	15	13
Chromium (Cr+3 + Cr+6)*	0.183 (Cr+3) 0.016 (Cr+6)	0.024 (Cr+3) 0.011 (Cr+6)	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U
Cobalt	---	---	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U
Copper*	0.0036	0.0027	0.001	0.002	0.001	0.003	0.002	0.001	0.002	0.002	0.001
Iron	---	1	0.26	0.92	0.93	0.11	0.12	0.34	0.35	0.36	0.42
Lead*	0.014	0.00054	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U
Magnesium	---	---	3.5	4.9	4.8	5.7	4.0	2.7	2.0	3.7	3.6
Manganese	---	---	0.054	0.22	0.22	0.022	0.048	0.04	0.03	0.23	0.029
Mercury*	0.0014	0.00077	0.0001U	0.0001U	0.0001U	0.0001U	0.0001U	0.0001U	0.0001U	0.0001U	0.001U
Nickel*	0.1449	0.016	0.001	0.002	0.002	0.002	0.002	0.001	0.002	0.002	0.001U
Potassium	---	---	2.1	5.5	5.5	6.4	2.6	1.6	1.0	2.8	3.6
Selenium	---	0.0005	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U
Silver*	0.00032	---	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U
Sodium	---	---	11	15	14	17	25	22	12	20	16
Thallium	1.4	0.04	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U	0.001U
Vanadium	---	---	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U
Zinc*	0.0362	0.0365	0.01	0.007	0.006	0.006	0.006	0.005U	0.006	0.005U	0.008
1,4-Dioxane by 8260B SIM ug/L											
1,4-Dioxane	---	---	0.25U	0.59	0.63	1.3	0.25U	0.25U	0.25U	0.25U	0.25U
GENERAL CHEMISTRY											
Ammonia** (mg/L)	pH Dependent		0.05U	0.05U	0.05U	0.05	0.05U	0.05U	0.05U	0.05U	0.05U
PERFLUORINATED CHEMICALS BY MODIFIED 537 - (ng/L)											
Perfluorobutanesulfonic acid (PFBS)	---	---	3.73J	2.30U	2.07U	2.2J	2.28U	2.28U	2.31U	2.20U	2.45U
Perfluoroheptanoic acid (PFHpA)	---	---	58.4	222	218	233	68.3	19.7J	3.58J	55.5	104
Perfluorohexanesulfonic acid (PFHxS)	---	---	13.0J	13.8J	13.3J	16.9J	4.8J	1.44J	1.39J	4.83J	7.53J
Perfluorooctanoic acid (PFOA)	---	---	129	794J	742J	763J	198J	57	11.4J	178	293
Perfluorononanoic acid (PFNA)	---	---	17.9J	296	308	235	38	14.7J	2.20U	36.9	80.7
Perfluorooctanesulfonic (PFOS)	---	---	36.2	391J	770J	758	77.1	25.5	5.57J	88.1	176
Combination of PFOA and PFOS	---	---	165.2	1185	1512	1521	275.1	82.5	16.97	266.1	469
FIELD PARAMETERS											
Temperature (degrees C)	---	---	10	9	NA	6	12	11	10	11	10
pH (Standard Units)	---	---	6.5	6.7	NA	6.7	6.9	6.3	6.3	6.4	6.1
Specific Conductance (us/cm)	---	---	135	246	NA	251	262	190	115	225	170
Dissolved Oxygen (mg/L)	---	---	5.9	1.8	NA	7.1	8.3	7.9	9.7	7.8	3.0
Turbidity (NTU)	---	---	<5	8	NA	<5	<5	<5	7	<5	16
Oxidation Reduction Potential (mV)	---	---	99	-44	NA	198	99	127	132	112	47

NOTES:

1. VOCs list is limited to analytes detected in samples
2. --- no standard has been established for the indicated parameter.
3. NHDES Surface Water Standards are listed in Env Wq 1700, Table 1703.1
4. There are no ROD ICLs established for surface water.
5. Highlighting: Bold values denote NHDES Acute Surface Water Criteria Exceedances; Gray shaded values denote NHDES Chronic Criteria Exceedances
6. The reporting detection limit (RDL) for zinc, silver and lead are consistent with RDLs specified in the SAP; however, they exceed the "default" (see footnote *) acute and/or chronic standards.

* Acute and chronic standards based on "default" values listed in Env Wq 1700, Table 1703.1. Actual standards may vary

** The freshwater and saltwater aquatic life criteria for ammonia are pH dependent. Refer to Env-Wq 1703.25 through Env-Wq 1703.31.

TABLE 4

Summary of Sediment Analytical Data for Spring 2017

Coakley Landfill Superfund Site - North Hampton and Greenland, New Hampshire

Sampling Point ID Date of Sample Collection	SQuiRT TEC (Dry Weight)	SED-4 5/2/2017	SED-5 5/2/2017	SED-5-DUP 5/2/2017	SED-110 4/25/2017	SED-LR 5/2/2017	SED-BB2 5/2/2017
TOTAL METALS BY 6020 - (mg/kg)							
Total Aluminum	---	6600	11000	12000	14000	16000	4200
Total Antimony	---	0.7	1.9	2	0.5U	0.5U	0.5U
Total Arsenic	9.79	4.1	12	13	7.5	4.9	8.5
Total Barium	---	67	110	120	90	110	27
Total Beryllium	---	0.5U	0.7	0.7	0.6	0.7	0.5U
Total Cadmium	0.99	0.7	0.6	0.6	0.5U	0.5U	0.5U
Total Calcium	---	12000	7000	7700	2200	3600	1200
Total Chromium	43.4	8.1	23	23	32	26	8.1
Total Cobalt	---	1.3	6.9	7.7	3.9	6	2.3
Total Copper	31.6	12	36	37	18	10	6.7
Total Iron	---	2200	15000	16000	9400	11000	13000
Total Lead	35.8	56	68	65	49	25	12
Total Magnesium	---	1600	3000	3100	3600	2800	1200
Total Manganese	---	360	290	310	140	380	110
Total Mercury	0.18	0.4	0.5J	1J	0.3	0.1U	0.1U
Total Nickel	22.7	6.2	20	21	18	14	6.8
Total Potassium	---	1300	2900	2900	2500	3700	800
Total Selenium	---	2.3	1.5	1.5	0.6	0.6	0.5U
Total Silver	---	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Total Sodium	---	200	300	300	200	400	100U
Total Thallium	---	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Total Vanadium	---	20	37	37	28	29	10
Total Zinc	121	62	80	82	78	45	15
1,4-Dioxane by 8260B SIM mg/kg							
1,4-Dioxane	---	0.6U	0.4U	0.5U	0.2U	0.2U	0.1U
PERFLUORINATED CHEMICALS BY MODIFIED 537 - (mg/kg)							
Perfluorobutanesulfonic acid (PFBS)	---	0.00123U	0.00122U	0.00123U	0.00122U	0.00121U	0.00123U
Perfluoroheptanoic acid (PFHpA)	---	0.00255J	0.00337J	0.00350J	0.00109U	0.00108U	0.00110U
Perfluorohexanesulfonic acid (PFHxS)	---	0.00190J	0.00129U	0.00130UJ	0.00129U	0.00128U	0.00130U
Perfluorooctanoic acid (PFOA)	---	0.00863J	0.0169	0.0171J	0.00112UJ	0.00111U	0.00113U
Perfluorononanoic acid (PFNA)	---	0.00526	0.0209	0.0225	0.00135U	0.00134U	0.00136U
Perfluorooctanesulfonic (PFOS)	---	0.0168J	0.152JD	0.164JD	0.00167J	0.00131U	0.00333J
Combination of PFOA and PFOS	---	0.02543	0.1689	0.1811	0.00167	ND	0.00333
TOTAL SOLIDS BY 2540G-91 - (Percent - %)							
Solids Total	---	19.8	23.6	22.7	52.1	31.5	70.1

NOTES:

mg/kg = milligram per kilogram, parts per million

--- = no standard has been established for the indicated parameter.

TABLE 4

Summary of Sediment Analytical Data for Spring 2017

Coakley Landfill Superfund Site - North Hampton and Greenland, New Hampshire

< = concentration is below reporting detection limit indicated

J, UJ = data qualifiers applied based on EPA's Tier I Plus data validation guidelines. J = estimated, UJ = estimated detection limit

1. Beginning in 2014, sediment data was qualified in accordance with EPA's Tier I Plus data validation guidelines.
2. The EPA has not established a cleanup standard for sediment.
3. of Sediment Quality Guidance Document, dated April 2005, that includes the "National Oceanic and Atmospheric Administration Screening Quick Reference Tables (NOAA SQuiRT Tables for Inorganics in Sediment - Freshwater). Current SQuiRT Tables are located on the NOAA website:
4. Shaded values denote concentrations exceeding the NOAA SQuiRT TEC standard.

TABLE 5

Summary of Leachate Analytical Results
Spring 2017
Coakley Landfill - North Hampton, New Hampshire

SAMPLE IDENTIFICATION	NHDES SURFACE WATER STANDARDS ACUTE	CHRONIC	L-1	L-1	L-1	L-1	L-1	L-1	L-1		L-1	L-1	L-1	L-1	L-1	L-1	L-1-DUP	L-1	L-1-DUP	L-1	L-1-DUP	L-1	L-1-DUP
DATE SAMPLED			16-Aug-01	7-Aug-02	27-Aug-03	25-Aug-04	25-Aug-05	30-Nov-06	13-Nov-07		12-Aug-08	19-Aug-09	17-Aug-10	19-Aug-11	30-Aug-12	14-Aug-13	14-Aug-13	17-Sep-15	17-Sep-15	1-Jun-16	1-Jun-16	28-Apr-17	28-Apr-17
COMMENTS								ID 104240															
PARAMETER ANALYZED																							
VOLATILE ORGANIC COMPOUNDS (ug/L)																							
Benzene	5300	NSE	3	2	2	<2	2	2	3		<1	1.9	2	2.0	2	2	2	2	2	1	1	<1	<1
Chlorobenzene	250	50	27	15	18	12	20	18	22		<2	20	24	18	15	13	14	16	14	11	12	<1	<1
Chloroethane	NSE	NSE	8	6	6	3	6	<2	6		<5	4.4	<5	4.1	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,4 Dichlorobenzene (See Note 4)			<2	3	2	<2	3	2	3		<1	2.5	3	2.3	2	2	2	2	2	2J	2J	<1	<1
1,3-Dichlorobenzene (See Note 4)	1120	763	<2	<2	<2	<2	<2	<2	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	2J	<1J	<1	<1
1,2 Dichlorobenzene (See Note 4)			<2	<2	<2	<2	<2	<2	1		<1	1.1	2	1.2	1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene	NSE	NSE	<2	<2	<2	<2	<2	2	2		<1	1.5	2	1.6	1	1	1	1	BDL	<1	<1	<1	<1
Diethyl Ether	NSE	NSE	31	<10	<10	<10	<10	<10	23		<5	13	15	12	10	10	10	11	10	7	7	<5	<5
Naphthalene	2300	620	<10	<10	<10	<10	<10	<10	<5		<5	0.6	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrahydrofuran	NSE	NSE	32	<30	<30	<30	<30	<30	20		<10	12	10	<10	<10	<10	<10	10	10	<10	<10	<10	<10
Toluene	NSE	NSE	<2	<2	<2	<2	<2	<2	<1		<1	<1	1	<1	<1	<1	<1	<1	2J	<1	<1	<1	<1
LOW LEVEL 1,4-DIOXANE (ug/L)																							
1,4-Dioxane	NSE	NSE	NA	NA	NA	NA	NA	NA	NA		NA	26	20	25	28	22	24	NA	NA	NA	NA	1.5	1.3
METALS (ug/L)			Total	Total	Total	Total	Total		Total	Dissolved	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
Aluminum	750	87	3200	4100	9,500	29,000	18,000	NA	<50	<50	170	<50	<50	<50	<50	<50	80	<50	<50	<50	<50	80	70
Antimony	9,000	1,600	6	<2	<2	<4	<6	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Arsenic	340	150	83	23	67	150	300	NA	7	6	4	4	7	6	4	5	7	6	6	3	3	2	2
Barium	NSE	NSE	1300	260	610	2200	4600	NA	97	99	11	100	100	97	87	92	110	100	96	74	73	11	10
Beryllium	130	5.3	3	<4	<4	3	<2	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium	0.95	0.80	<2	<2	<2	<4	<6	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Calcium	NSE	NSE	120,000	97,000	100,000	140,000	150,000	NA	50,000	62,000	20,000	64,000	71,000	63,000	79,000	56,000	57,000	67,000	67,000	52,000	52,000	17,000	16,000
Chromium	183	24	20	13	27	55	70	NA	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1
Cobalt	NSE	NSE	<2	3	6	11	10	NA	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Copper	3.6	2.7	<2	5	13	36	40	NA	<1	1	8	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	9	8
Iron	NSE	1,000	350,000	130,000	330,000	1,000,000	1,100,000	NA	30,000	27,000	1,200	35,000	34,000	31,000	31,000	35,000	45,000	35,000	33,000	36,000	35,000	2,800	2,500
Lead	14	0.54	<2	2	8	34	<6	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Magnesium	NSE	NSE	49,000	43,000	36,000	34,000	43,000	NA	20,000	25,000	2,500	25,000	21,000	21,000	20,000	16,000	16,000	17,000	17,000	18,000	18,000	3,400	3,100
Manganese	NSE	NSE	7,600	5,700	5,900	10,000	9,800	NA	2,700	3,200	98	3,200	2,900	2,700	3,300	2,500	2,500	2400 J+	2,200 J+	2,700	2,700	400	370
Mercury	1.4	0.77	<0.2	<0.2	<0.2	<0.2	<0.2	NA	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	144.9	16.1	22	18	28	32	40	NA	7	8	3	7	6	4	6	5	5	5	5	5J	5J	4	3
Potassium	NSE	NSE	66	55	46,000	38,000	50,000	NA	34,000	40	7,800	37,000	33,000	30,000	31,000	25,000	27,000	26,000	27,000	25,000	25,000	5,200	5,300
Selenium	NSE	5	7	8	4	3	<2	NA	<1	<1	<1	<1	2	2	5	5	5	5	5	3	3	4	3
Silver	0.32	NSE	<2	<2	2	<4	<6	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1J	<1J	<1	<1
Sodium	NSE	NSE	220,000	200,000	160,000	140,000	150,000	NA	130,000	150,000	<10	100,000	110,000	91,000	100,000	78,000	76,000	90,000	90,000	61,000	62,000	8,000	8,000
Thallium	1,400	40	<2	<2	<2	<4	<6	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium	NSE	NSE	46	13	36	89	220	NA	1	1	2	2	1	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5
Zinc	36.2	36.5	45	51	140	390	690	NA	<5	650	56	12	6	<5	<5	<5	10	<5	<5	<5	<5	38	34
PERFLUORINATED CHEMICALS BY MODIFIED 537 - (ng/L)																							
Perfluorobutanesulfonic acid (PFBS)	NSE	NSE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.09U	2.13U
Perfluoroheptanoic acid (PFHpA)	NSE	NSE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	175	170
Perfluorohexanesulfonic acid (PFHxS)	NSE	NSE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.12J	9.39J
Perfluorooctanoic acid (PFOA)	NSE	NSE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	656	736
Perfluorononanoic acid (PFNA)	NSE	NSE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	308	310
Perfluorooctanesulfonic (PFOS)	NSE	NSE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1930D	1560J
Combination of PFOA and PFOS	NSE	NSE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2586	2296
GENERAL CHEMISTRY																							
Chemical Oxygen Demand (mg/l)	NSE	NSE	190	178	560	282	377	NA	70		50	50	54	40	44	52	68	32	43	19	18	28	33
Ammonia-N (mg/l)	36.1	5.91	44	41	44.8	56.8	79	NA	33		0.62	21	22	25	24	21	19	23	23	110	100	1.5	1.3

FIELD PARAMETERS	13-Nov-07	12-Aug-08	19-Aug-09	17-Aug-10	19-Aug-11	30-Aug-12	14-Aug-13	14-Aug-13 DUP	17-Sep-15	17-Sep-15 DUP	1-Jun-16	1-Jun-16 DUP	28-Apr-17	28-Apr-17 DUP
Temperature (degrees Celcius)	12	18	14	16	15	16	15	NA	15	NA	11	NA	11	NA
pH (standard units)	6.2	6.6	6.4	6.6	5.1	6.6	6.3	NA	6.4	NA	6.6	NA	6.7	NA
Conductivity (us/cm)	1,600	176	1,459	1,500	821	1,399	1,220	NA	1,283	NA	1,223	NA	189	NA
Dissolved Oxygen (mg/l)	2.2	4.9	1.3	0.6	3.4	2.3	2.3	NA	2.6	NA	0.8	NA	5.1	NA
Turbidity (NTU)	18	90	10	9	2	17	144	NA	6	NA	10	NA	16	NA
Oxidation/Reduction Potential (mV)	138	42	-38	-99	-73	-76	-102	NA	-111	NA	-60	NA	-25	NA

NOTES:
1. BDL = Below Detection Limit; NA = Not Analyzed
2. NSE indicates no standard has been established for the indicated parameter.
3. NHDES Surface Water Standard are listed in Env Wq 1700
4. Acute and chronic standards based on total dichlorobenzenes
5. Ammonia-N standard is based on pH of 7.0 at 14 C, salinoids not present.
6. A **bold** entry indicates the parameter exceeded the acute surface water standard.
7. Shaded values indicate the parameter exceeded the chronic surface water standard.
8. **Bold and shaded values indicate exceedances of both NHDES acute and chronic criteria.**
9. Volatile organic compounds and metals results are in micrograms per liter (µg/l).
10. Only volatile organic compounds detected in one or more leachate sample during the period shown are listed.
11. Only volatile organic compounds detected in one or more leachate sample during the period shown are listed.
12. Refer to Table 2 and 3 for Field Parameter unit abbreviations
13. The laboratory detection limits (for 2013) were above the either the Acute or Chronic standard for the following parameters (detection limit in parantheses): Cadmium (1 ug/L), Lead (1 ug/L) and Silver (1 ug/L).

LABORATORY ANALYTICAL METHODS *(Not Confirmed for Analyses Performed Prior to 2010)*
1. Volatile Organic Compounds (VOC) analyzed by EPA Method 8260B.
2. 1,4-dioxane (low level) analyzed by EPA Method 8260B SIM
3. Metals analyzed by EPA Method 200.8
4. Chemical Oxygen Demand analyzed by 4500-NH3
5. Ammonia-N analyzed by H8000

Table 6

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Sample ID			GW-AE-3A			GW-AE-3A-DUP			
Sample Collection Date			4/25/2016			4/25/2016			
Laboratory Sample ID			167944.14			167944.15			Relative Percent
Parameter	Method	Units	Result	Flag	RL	Result	Flag	RL	Difference (RPD)
Dissolved Antimony	200.8-Dissolved	mg/L	0.001	U	0	0.001	U	0	0%
Dissolved Arsenic	200.8-Dissolved	mg/L	0.093			0.09			3%
Dissolved Barium	200.8-Dissolved	mg/L	0.06			0.059			2%
Dissolved Beryllium	200.8-Dissolved	mg/L	0.001	U	0	0.001	U	0	0%
Dissolved Calcium	200.8-Dissolved	mg/L	40			40			0%
Dissolved Chromium	200.8-Dissolved	mg/L	0.001	U	0	0.001	U	0	0%
Dissolved Iron	200.8-Dissolved	mg/L	22			22			0%
Dissolved Lead	200.8-Dissolved	mg/L	0.001	U	0	0.001	U	0	0%
Dissolved Magnesium	200.8-Dissolved	mg/L	17			18			6%
Dissolved Manganese	200.8-Dissolved	mg/L	1.2			1.2			0%
Dissolved Nickel	200.8-Dissolved	mg/L	0.006			0.006			0%
Dissolved Potassium	200.8-Dissolved	mg/L	16			16			0%
Dissolved Sodium	200.8-Dissolved	mg/L	58			59			2%
Dissolved Vanadium	200.8-Dissolved	mg/L	0.005	U	0.01	0.005	U	0.01	0%
Hexavalent Chromium	7196A	mg/L	0.1	UJ	0.1	0.1	UJ	0.1	0%
1,1,1,2-Tetrachloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1,1-Trichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1,2,2-Tetrachloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1,2-Trichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1-Dichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1-Dichloroethene	8260B	ug/l	1	U	1	1	U	1	0%
1,1-Dichloropropene	8260B	ug/l	2	U	2	2	U	2	0%
1,2,3-Trichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,2,3-Trichloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,2,4-Trichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,2,4-Trimethylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,2-Dibromo-3-chloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,2-Dibromoethane(EDB)	8260B	ug/l	2	U	2	2	U	2	0%
1,2-Dichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,2-Dichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,2-Dichloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,3,5-Trichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,3,5-Trimethylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,3-Dichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,3-Dichloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,4-Dichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,4-Dioxane	8260B	ug/l	50	U	50	50	U	50	0%
2,2-Dichloropropane	8260B	ug/l	2	UJ	2	2	UJ	2	0%

Table 6

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Sample ID			GW-AE-3A			GW-AE-3A-DUP			
Sample Collection Date			4/25/2016			4/25/2016			
Laboratory Sample ID			167944.14			167944.15			**Relative Percent**
Parameter	**Method**	**Units**	**Result**	**Flag**	**RL**	**Result**	**Flag**	**RL**	**Difference (RPD)**
2-Butanone(MEK)	8260B	ug/l	10	U	10	10	U	10	0%
2-Chlorotoluene	8260B	ug/l	2	U	2	2	U	2	0%
2-Hexanone	8260B	ug/l	10	U	10	10	U	10	0%
4-Chlorotoluene	8260B	ug/l	2	U	2	2	U	2	0%
4-Methyl-2-pentanone(MIBK)	8260B	ug/l	10	U	10	10	U	10	0%
Acetone	8260B	ug/l	10	U	10	10	U	10	0%
Benzene	8260B	ug/l	1			1			0%
Bromobenzene	8260B	ug/l	2	U	2	2	U	2	0%
Bromochloromethane	8260B	ug/l	2	U	2	2	U	2	0%
Bromodichloromethane	8260B	ug/l	0.5	U	0.5	0.5	U	0.5	0%
Bromoform	8260B	ug/l	2	U	2	2	U	2	0%
Bromomethane	8260B	ug/l	2	UJ	2	2	UJ	2	0%
Carbon disulfide	8260B	ug/l	5	U	5	5	U	5	0%
Carbon tetrachloride	8260B	ug/l	2	U	2	2	U	2	0%
Chlorobenzene	8260B	ug/l	5			5			0%
Chloroethane	8260B	ug/l	6	J+		6	J+		0%
Chloroform	8260B	ug/l	2	U	2	2	U	2	0%
Chloromethane	8260B	ug/l	2	U	2	2	U	2	0%
cis-1,2-Dichloroethene	8260B	ug/l	2	U	2	2	U	2	0%
cis-1,3-Dichloropropene	8260B	ug/l	2	U	2	2	U	2	0%
Dibromochloromethane	8260B	ug/l	2	U	2	2	U	2	0%
Dibromomethane	8260B	ug/l	2	U	2	2	U	2	0%
Dichlorodifluoromethane	8260B	ug/l	5	U	5	5	U	5	0%
Diethyl Ether	8260B	ug/l	11			11			0%
Ethylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
Ethyl-t-butyl ether(ETBE)	8260B	ug/l	5	U	5	5	U	5	0%
Hexachlorobutadiene	8260B	ug/l	0.5	U	0.5	0.5	U	0.5	0%
Isopropyl ether(DIPE)	8260B	ug/l	5	U	5	5	U	5	0%
IsoPropylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
Methylene chloride	8260B	ug/l	5	U	5	5	U	5	0%
Methyl-t-butyl ether(MTBE)	8260B	ug/l	5	U	5	5	U	5	0%
mp-Xylene	8260B	ug/l	1	U	1	1	U	1	0%
Naphthalene	8260B	ug/l	5	U	5	5	U	5	0%
n-Butylbenzene	8260B	ug/l	1	U	1	1	U	1	0%

Table 6
Duplicate Comparisons
Coakley Landfill Superfund Site
North Hampton and Greenland, New Hampshire

Sample ID			GW-AE-3A			GW-AE-3A-DUP			
Sample Collection Date			4/25/2016			4/25/2016			
Laboratory Sample ID			167944.14			167944.15			**Relative Percent**
Parameter	**Method**	**Units**	**Result**	**Flag**	**RL**	**Result**	**Flag**	**RL**	**Difference (RPD)**
n-Propylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
o-Xylene	8260B	ug/l	1	U	1	1	U	1	0%
p-Isopropyltoluene	8260B	ug/l	1	U	1	1	U	1	0%
sec-Butylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
Styrene	8260B	ug/l	1	U	1	1	U	1	0%
tert-amyl methyl ether(TAME)	8260B	ug/l	5	U	5	5	U	5	0%
tert-Butyl Alcohol (TBA)	8260B	ug/l	30	U	30	30	U	30	0%
tert-Butylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
Tetrachloroethene	8260B	ug/l	2	U	2	2	U	2	0%
Tetrahydrofuran(THF)	8260B	ug/l	10	U	10	10	U	10	0%
Toluene	8260B	ug/l	1	U	1	1	U	1	0%
trans-1,2-Dichloroethene	8260B	ug/l	2	U	2	2	U	2	0%
trans-1,3-Dichloropropene	8260B	ug/l	2	U	2	2	U	2	0%
Trichloroethene	8260B	ug/l	2	U	2	2	U	2	0%
Trichlorofluoromethane	8260B	ug/l	5	U	5	5	U	5	0%
Vinyl chloride	8260B	ug/l	2	U	2	2	U	2	0%
1,4-Dioxane	8260B SIM	ug/l	14		0.25	16		0.25	13%
Perfluorobutanesulfonic acid (PFBS)	537 Modified	ng/L	4.17	J		4.44	J		6%
Perfluoroheptanoic acid (PFHpA)	537 Modified	ng/L	122			121			1%
Perfluorohexanesulfonic acid (PFHxS)	537 Modified	ng/L	16.8			17.9	J		6%
Perfluorooctanoic acid (PFOA)	537 Modified	ng/L	387			339			13%
Perfluorononanoic acid (PFNA)	537 Modified	ng/L	54.1			45.1			18%
Perfluorooctanesulfonic (PFOS)	537 Modified	ng/L	91.9			87.6			5%
Combination of PFOA and PFOS			478.9			426.6			12%

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Table 6

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Sample ID			GW-GZ-105			GW-GZ-105-DUP			
Sample Collection Date			5/2/2017			5/2/2017			
Laboratory Sample ID			168160.15			168160.18			Relative Percent
Parameter	Method	Units	Result	Flag	RL	Result	Flag	RL	Difference (RPD)
Total Antimony	200.8-Total	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Total Arsenic	200.8-Total	mg/L	0.014			0.013			7%
Total Barium	200.8-Total	mg/L	0.044			0.042			5%
Total Beryllium	200.8-Total	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Total Calcium	200.8-Total	mg/L	50			47			6%
Total Chromium	200.8-Total	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Total Iron	200.8-Total	mg/L	3.8			3.5			8%
Total Lead	200.8-Total	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Total Magnesium	200.8-Total	mg/L	19			18			5%
Total Manganese	200.8-Total	mg/L	0.42			0.39			7%
Total Nickel	200.8-Total	mg/L	0.007			0.007			0%
Total Potassium	200.8-Total	mg/L	6.3			6.1			3%
Total Sodium	200.8-Total	mg/L	130			130			0%
Total Vanadium	200.8-Total	mg/L	0.005	U	0.005	0.005	U	0.005	0%
Hexavalent Chromium	7196A	mg/L	0.1	U	0.1	0.1	U	0.1	0%
1,1,1,2-Tetrachloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1,1-Trichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1,2,2-Tetrachloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1,2-Trichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1-Dichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1-Dichloroethene	8260B	ug/l	1	U	1	1	U	1	0%
1,1-Dichloropropene	8260B	ug/l	2	U	2	2	U	2	0%
1,2,3-Trichlorobenzene	8260B	ug/l	1	UJ	1	1	UJ	1	0%
1,2,3-Trichloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,2,4-Trichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,2,4-Trimethylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,2-Dibromo-3-chloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,2-Dibromoethane(EDB)	8260B	ug/l	2	U	2	2	U	2	0%
1,2-Dichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,2-Dichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,2-Dichloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,3,5-Trichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,3,5-Trimethylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,3-Dichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,3-Dichloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,4-Dichlorobenzene	8260B	ug/l	3			2			**40%**
1,4-Dioxane	8260B	ug/l	50	U	50	50	U	50	0%
2,2-Dichloropropane	8260B	ug/l	2	UJ	2	2	UJ	2	0%
2-Butanone(MEK)	8260B	ug/l	10	U	10	10	U	10	0%
2-Chlorotoluene	8260B	ug/l	2	U	2	2	U	2	0%
2-Hexanone	8260B	ug/l	10	U	10	10	U	10	0%
4-Chlorotoluene	8260B	ug/l	2	U	2	2	U	2	0%
4-Methyl-2-pentanone(MIBK)	8260B	ug/l	10	U	10	10	U	10	0%

Table 6
Duplicate Comparisons
Coakley Landfill Superfund Site
North Hampton and Greenland, New Hampshire

Sample ID			GW-GZ-105			GW-GZ-105-DUP			
Sample Collection Date			5/2/2017			5/2/2017			
Laboratory Sample ID			168160.15			168160.18			Relative Percent
Parameter	Method	Units	Result	Flag	RL	Result	Flag	RL	Difference (RPD)
Acetone	8260B	ug/l	10	UJ	10	10	UJ	10	0%
Benzene	8260B	ug/l	4			4			0%
Bromobenzene	8260B	ug/l	2	U	2	2	U	2	0%
Bromochloromethane	8260B	ug/l	2	U	2	2	U	2	0%
Bromodichloromethane	8260B	ug/l	0.5	U	0.5	0.5	U	0.5	0%
Bromoform	8260B	ug/l	2	UJ	2	2	UJ	2	0%
Bromomethane	8260B	ug/l	2	UJ	2	2	UJ	2	0%
Carbon disulfide	8260B	ug/l	5	U	5	5	U	5	0%
Carbon tetrachloride	8260B	ug/l	2	U	2	2	U	2	0%
Chlorobenzene	8260B	ug/l	6			6			0%
Chloroethane	8260B	ug/l	7		5	7		5	0%
Chloroform	8260B	ug/l	2	U	2	2	U	2	0%
Chloromethane	8260B	ug/l	2	U	2	2	U	2	0%
cis-1,2-Dichloroethene	8260B	ug/l	2	U	2	2	U	2	0%
cis-1,3-Dichloropropene	8260B	ug/l	2	U	2	2	U	2	0%
Dibromochloromethane	8260B	ug/l	2	U	2	2	U	2	0%
Dibromomethane	8260B	ug/l	2	U	2	2	U	2	0%
Dichlorodifluoromethane	8260B	ug/l	5	U	5	5	U	5	0%
Diethyl Ether	8260B	ug/l	42			42			0%
Ethylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
Ethyl-t-butyl ether(ETBE)	8260B	ug/l	5	UJ	5	5	UJ	5	0%
Hexachlorobutadiene	8260B	ug/l	0.5	UJ	0.5	0.5	UJ	0.5	0%
Isopropyl ether(DIPE)	8260B	ug/l	5	U	5	5	U	5	0%
IsoPropylbenzene	8260B	ug/l	1		1	1		1	0%
Methylene chloride	8260B	ug/l	5	U	5	5	U	5	0%
Methyl-t-butyl ether(MTBE)	8260B	ug/l	5	U	5	5	U	5	0%
mp-Xylene	8260B	ug/l	1	U	1	1	U	1	0%
Naphthalene	8260B	ug/l	5	U	5	5	U	5	0%
n-Butylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
n-Propylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
o-Xylene	8260B	ug/l	1	U	1	1	U	1	0%
p-Isopropyltoluene	8260B	ug/l	1	U	1	1	U	1	0%
sec-Butylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
Styrene	8260B	ug/l	1	U	1	1	U	1	0%
tert-amyl methyl ether(TAME)	8260B	ug/l	5	UJ	5	5	UJ	5	0%
tert-Butyl Alcohol (TBA)	8260B	ug/l	30	UJ	30	30	UJ	30	0%
tert-Butylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
Tetrachloroethene	8260B	ug/l	2	U	2	2	U	2	0%
Tetrahydrofuran(THF)	8260B	ug/l	30			30			0%
Toluene	8260B	ug/l	1	U	1	1	U	1	0%
trans-1,2-Dichloroethene	8260B	ug/l	2	U	2	2	U	2	0%
trans-1,3-Dichloropropene	8260B	ug/l	2	U	2	2	U	2	0%
Trichloroethene	8260B	ug/l	2	U	2	2	U	2	0%
Trichlorofluoromethane	8260B	ug/l	5	U	5	5	U	5	0%
Vinyl chloride	8260B	ug/l	2	U	2	2	U	2	0%

Table 6
Duplicate Comparisons
Coakley Landfill Superfund Site
North Hampton and Greenland, New Hampshire

Sample ID			GW-GZ-105			GW-GZ-105-DUP			
Sample Collection Date			5/2/2017			5/2/2017			
Laboratory Sample ID			168160.15			168160.18			Relative Percent
Parameter	Method	Units	Result	Flag	RL	Result	Flag	RL	Difference (RPD)
1,4-Dioxane	8260B SIM	ug/l	65			67			3%
Perfluorobutanesulfonic acid (PFBS)	537 Modified	ng/L	13.4	J		14.9	J		11%
Perfluoroheptanoic acid (PFHpA)	537 Modified	ng/L	123			140			13%
Perfluorohexanesulfonic acid (PFHxS)	537 Modified	ng/L	66.4			64.1			4%
Perfluorooctanoic acid (PFOA)	537 Modified	ng/L	340			425			22%
Perfluorononanoic acid (PFNA)	537 Modified	ng/L	19.8			23.4			17%
Perfluorooctanesulfonic (PFOS)	537 Modified	ng/L	163			211			26%
Combination of PFOA and PFOS			503			636			23%

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Table 6

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Sample ID			GW-MW-4			GW-MW-4-DUP			
Sample Collection Date			5/1/2017			5/1/2017			
Laboratory Sample ID			168160.05			168160.06			**Relative Percent**
Parameter	**Method**	**Units**	**Result**	**Flag**	**RL**	**Result**	**Flag**	**RL**	**Difference (RPD)**
Dissolved Antimony	200.8-Dissolved	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Arsenic	200.8-Dissolved	mg/L	0.046			0.042			9%
Dissolved Barium	200.8-Dissolved	mg/L	0.076			0.067			13%
Dissolved Beryllium	200.8-Dissolved	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Calcium	200.8-Dissolved	mg/L	68			60			13%
Dissolved Chromium	200.8-Dissolved	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Iron	200.8-Dissolved	mg/L	26			23			12%
Dissolved Lead	200.8-Dissolved	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Magnesium	200.8-Dissolved	mg/L	22			19			15%
Dissolved Manganese	200.8-Dissolved	mg/L	1.2			1.1			9%
Dissolved Nickel	200.8-Dissolved	mg/L	0.009			0.008			12%
Dissolved Potassium	200.8-Dissolved	mg/L	35			32			9%
Dissolved Sodium	200.8-Dissolved	mg/L	37			34			8%
Dissolved Vanadium	200.8-Dissolved	mg/L	0.005	U	0.005	0.005	U	0.005	0%
Hexavalent Chromium	7196A	mg/L	0.1	U	0.1	0.1	U	0.1	0%
1,4-Dioxane	8260B SIM	ug/l	4.6			4.6			0%
Perfluorobutanesulfonic acid (PFBS)	537 Modified	ng/L	8.41	J		7.82	J		7%
Perfluoroheptanoic acid (PFHpA)	537 Modified	ng/L	707			709			0%
Perfluorohexanesulfonic acid (PFHxS)	537 Modified	ng/L	35.7			31.3			13%
Perfluorooctanoic acid (PFOA)	537 Modified	ng/L	1240	D		1050	D		17%
Perfluorononanoic acid (PFNA)	537 Modified	ng/L	59.8			54.5			9%
Perfluorooctanesulfonic (PFOS)	537 Modified	ng/L	55.8			60.6			8%
Combination of PFOA and PFOS			1296			1111			15%

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Table 6
Duplicate Comparisons
Coakley Landfill Superfund Site
North Hampton and Greenland, New Hampshire

Sample ID			L-L-1			L-L-1-DUP			
Sample Collection Date			4/28/2017			4/28/2017			
Laboratory Sample ID			168017.24			168017.25			Relative Percent
Parameter	Method	Units	Result	Flag	RL	Result	Flag	RL	Difference (RPD)
Dissolved Aluminum	200.8	mg/L	0.08			0.07			13%
Dissolved Antimony	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Arsenic	200.8	mg/L	0.002			0.002			0%
Dissolved Barium	200.8	mg/L	0.011			0.01			10%
Dissolved Beryllium	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Cadmium	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Calcium	200.8	mg/L	17			16			6%
Dissolved Chromium	200.8	mg/L	0.001	U	0.001	0.001		0.001	0%
Dissolved Cobalt	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Copper	200.8	mg/L	0.009			0.008			12%
Dissolved Iron	200.8	mg/L	2.8			2.5			11%
Dissolved Lead	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Magnesium	200.8	mg/L	3.4			3.1			9%
Dissolved Manganese	200.8	mg/L	0.4			0.37			8%
Dissolved Mercury	200.8	mg/L	0.0001	U	0.0001	0.0001	U	0.0001	0%
Dissolved Nickel	200.8	mg/L	0.004			0.003			29%
Dissolved Potassium	200.8	mg/L	5.2			5.3			2%
Dissolved Selenium	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Silver	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Sodium	200.8	mg/L	8			8			0%
Dissolved Thallium	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Vanadium	200.8	mg/L	0.005	U	0.005	0.005	U	0.005	0%
Dissolved Zinc	200.8	mg/L	0.038			0.034			11%
1,1,1,2-Tetrachloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1,1-Trichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1,2,2-Tetrachloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1,2-Trichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1-Dichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1-Dichloroethene	8260B	ug/l	1	U	1	1	U	1	0%
1,1-Dichloropropene	8260B	ug/l	2	U	2	2	U	2	0%
1,2,3-Trichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,2,3-Trichloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,2,4-Trichlorobenzene	8260B	ug/l	1	UJ	1	1	UJ	1	0%
1,2,4-Trimethylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,2-Dibromo-3-chloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,2-Dibromoethane(EDB)	8260B	ug/l	2	U	2	2	U	2	0%
1,2-Dichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,2-Dichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,2-Dichloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,3,5-Trichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,3,5-Trimethylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,3-Dichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,3-Dichloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,4-Dichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%

Table 6
Duplicate Comparisons
Coakley Landfill Superfund Site
North Hampton and Greenland, New Hampshire

Sample ID			L-L-1			L-L-1-DUP			
Sample Collection Date			4/28/2017			4/28/2017			
Laboratory Sample ID			168017.24			168017.25			Relative Percent
Parameter	Method	Units	Result	Flag	RL	Result	Flag	RL	Difference (RPD)
1,4-Dioxane	8260B	ug/l	50	U	50	50	U	50	0%
2,2-Dichloropropane	8260B	ug/l	2	UJ	2	2	UJ	2	0%
2-Butanone(MEK)	8260B	ug/l	10	U	10	10	U	10	0%
2-Chlorotoluene	8260B	ug/l	2	U	2	2	U	2	0%
2-Hexanone	8260B	ug/l	10	U	10	10	U	10	0%
4-Chlorotoluene	8260B	ug/l	2	U	2	2	U	2	0%
4-Methyl-2-pentanone(MIBK)	8260B	ug/l	10	U	10	10	U	10	0%
Acetone	8260B	ug/l	10	UJ	10	10	UJ	10	0%
Benzene	8260B	ug/l	1	U	1	1	U	1	0%
Bromobenzene	8260B	ug/l	2	U	2	2	U	2	0%
Bromochloromethane	8260B	ug/l	2	U	2	2	U	2	0%
Bromodichloromethane	8260B	ug/l	0.5	U	0.5	0.5	U	0.5	0%
Bromoform	8260B	ug/l	2	UJ	2	2	UJ	2	0%
Bromomethane	8260B	ug/l	2	U	2	2	U	2	0%
Carbon disulfide	8260B	ug/l	5	U	5	5	U	5	0%
Carbon tetrachloride	8260B	ug/l	2	U	2	2	U	2	0%
Chlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
Chloroethane	8260B	ug/l	5	U	5	5	U	5	0%
Chloroform	8260B	ug/l	2	U	2	2	U	2	0%
Chloromethane	8260B	ug/l	2	U	2	2	U	2	0%
cis-1,2-Dichloroethene	8260B	ug/l	2	U	2	2	U	2	0%
cis-1,3-Dichloropropene	8260B	ug/l	2	U	2	2	U	2	0%
Dibromochloromethane	8260B	ug/l	2	U	2	2	U	2	0%
Dibromomethane	8260B	ug/l	2	U	2	2	U	2	0%
Dichlorodifluoromethane	8260B	ug/l	5	U	5	5	U	5	0%
Diethyl Ether	8260B	ug/l	5	U	5	5	U	5	0%
Ethylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
Ethyl-t-butyl ether(ETBE)	8260B	ug/l	5	UJ	5	5	UJ	5	0%
Hexachlorobutadiene	8260B	ug/l	0.5	UJ	0.5	0.5	UJ	0.5	0%
Isopropyl ether(DIPE)	8260B	ug/l	5	U	5	5	U	5	0%
IsoPropylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
Methylene chloride	8260B	ug/l	5	U	5	5	U	5	0%
Methyl-t-butyl ether(MTBE)	8260B	ug/l	5	U	5	5	U	5	0%
mp-Xylene	8260B	ug/l	1	U	1	1	U	1	0%
Naphthalene	8260B	ug/l	5	U	5	5	U	5	0%
n-Butylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
n-Propylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
o-Xylene	8260B	ug/l	1	U	1	1	U	1	0%
p-Isopropyltoluene	8260B	ug/l	1	U	1	1	U	1	0%
sec-Butylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
Styrene	8260B	ug/l	1	U	1	1	U	1	0%
tert-amyl methyl ether(TAME)	8260B	ug/l	5	UJ	5	5	UJ	5	0%
tert-Butyl Alcohol (TBA)	8260B	ug/l	30	UJ	30	30	UJ	30	0%
tert-Butylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
Tetrachloroethene	8260B	ug/l	2	U	2	2	U	2	0%

Table 6
Duplicate Comparisons
Coakley Landfill Superfund Site
North Hampton and Greenland, New Hampshire

Sample ID			L-L-1			L-L-1-DUP			
Sample Collection Date			4/28/2017			4/28/2017			
Laboratory Sample ID			168017.24			168017.25			**Relative Percent**
Parameter	**Method**	**Units**	**Result**	**Flag**	**RL**	**Result**	**Flag**	**RL**	**Difference (RPD)**
Tetrahydrofuran(THF)	8260B	ug/l	10	U	10	10	U	10	0%
Toluene	8260B	ug/l	1	U	1	1	U	1	0%
trans-1,2-Dichloroethene	8260B	ug/l	2	U	2	2	U	2	0%
trans-1,3-Dichloropropene	8260B	ug/l	2	U	2	2	U	2	0%
Trichloroethene	8260B	ug/l	2	U	2	2	U	2	0%
Trichlorofluoromethane	8260B	ug/l	5	U	5	5	U	5	0%
Vinyl chloride	8260B	ug/l	2	U	2	2	U	2	0%
Ammonia-N	TM NH3-001	mg/L	1.5			1.3			14%
COD	H8000	mg/L	28			33			16%
1,4-Dioxane	8260B SIM	ug/l	1.5			1.3			14%
Perfluorobutanesulfonic acid (PFBS)	537 Modified	ng/L	2.09	U		2.13	U		2%
Perfluoroheptanoic acid (PFHpA)	537 Modified	ng/L	175			170			3%
Perfluorohexanesulfonic acid (PFHxS)	537 Modified	ng/L	9.12	J		9.39	J		3%
Perfluorooctanoic acid (PFOA)	537 Modified	ng/L	656			736			11%
Perfluorononanoic acid (PFNA)	537 Modified	ng/L	308			310			1%
Perfluorooctanesulfonic (PFOS)	537 Modified	ng/L	1930	J		1560	J		21%
Combination of PFOA and PFOS			2586			2296			12%

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Table 6

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Sample ID			SW-SW-5			SW-SW-5-DUP			
Sample Collection Date			5/2/2017			5/2/2017			
Laboratory Sample ID			168160.22			168160.24			**Relative Percent**
Parameter	**Method**	**Units**	**Result**	**Flag**	**RL**	**Result**	**Flag**	**RL**	**Difference (RPD)**
Dissolved Aluminum	200.8	mg/L	0.05	U	0.05	0.05	U	0.05	0%
Dissolved Antimony	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Arsenic	200.8	mg/L	0.001			0.001			0%
Dissolved Barium	200.8	mg/L	0.009			0.009			0%
Dissolved Beryllium	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Cadmium	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Calcium	200.8	mg/L	21			21			0%
Dissolved Chromium	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Cobalt	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Copper	200.8	mg/L	0.002			0.001			67%
Dissolved Iron	200.8	mg/L	0.92			0.93			1%
Dissolved Lead	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Magnesium	200.8	mg/L	4.9			4.8			2%
Dissolved Manganese	200.8	mg/L	0.22			0.22			0%
Dissolved Mercury	200.8	mg/L	0.0001	U	0.0001	0.0001	U	0.0001	0%
Dissolved Nickel	200.8	mg/L	0.002			0.002			0%
Dissolved Potassium	200.8	mg/L	5.5			5.5			0%
Dissolved Selenium	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Silver	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Sodium	200.8	mg/L	15			14			7%
Dissolved Thallium	200.8	mg/L	0.001	U	0.001	0.001	U	0.001	0%
Dissolved Vanadium	200.8	mg/L	0.005	U	0.005	0.005	U	0.005	0%
Dissolved Zinc	200.8	mg/L	0.007			0.006			15%
1,1,1,2-Tetrachloroethane	8260B	ug/l	2	UJ	2	2	UJ	2	0%
1,1,1-Trichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1,2,2-Tetrachloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1,2-Trichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1-Dichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,1-Dichloroethene	8260B	ug/l	1	U	1	1	U	1	0%
1,1-Dichloropropene	8260B	ug/l	2	U	2	2	U	2	0%
1,2,3-Trichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,2,3-Trichloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,2,4-Trichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,2,4-Trimethylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,2-Dibromo-3-chloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,2-Dibromoethane(EDB)	8260B	ug/l	2	U	2	2	U	2	0%
1,2-Dichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,2-Dichloroethane	8260B	ug/l	2	U	2	2	U	2	0%
1,2-Dichloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,3,5-Trichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,3,5-Trimethylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,3-Dichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%
1,3-Dichloropropane	8260B	ug/l	2	U	2	2	U	2	0%
1,4-Dichlorobenzene	8260B	ug/l	1	U	1	1	U	1	0%

Table 6
Duplicate Comparisons
Coakley Landfill Superfund Site
North Hampton and Greenland, New Hampshire

Sample ID			SW-SW-5			SW-SW-5-DUP			
Sample Collection Date			5/2/2017			5/2/2017			
Laboratory Sample ID			168160.22			168160.24			Relative Percent
Parameter	Method	Units	Result	Flag	RL	Result	Flag	RL	Difference (RPD)
1,4-Dioxane	8260B	ug/l	50	U	50	50	U	50	0%
2,2-Dichloropropane	8260B	ug/l	2	U	2	2	U	2	0%
2-Butanone(MEK)	8260B	ug/l	10	U	10	10	U	10	0%
2-Chlorotoluene	8260B	ug/l	2	U	2	2	U	2	0%
2-Hexanone	8260B	ug/l	10	U	10	10	U	10	0%
4-Chlorotoluene	8260B	ug/l	2	U	2	2	U	2	0%
4-Methyl-2-pentanone(MIBK)	8260B	ug/l	10	U	10	10	U	10	0%
Acetone	8260B	ug/l	10	U	10	10	U	10	0%
Benzene	8260B	ug/l	1	U	1	1	U	1	0%
Bromobenzene	8260B	ug/l	2	U	2	2	U	2	0%
Bromochloromethane	8260B	ug/l	2	U	2	2	U	2	0%
Bromodichloromethane	8260B	ug/l	0.5	U	0.5	0.5	U	0.5	0%
Bromoform	8260B	ug/l	2	UJ	2	2	UJ	2	0%
Bromomethane	8260B	ug/l	2	UJ	2	2	UJ	2	0%
Carbon disulfide	8260B	ug/l	5	U	5	5	U	5	0%
Carbon tetrachloride	8260B	ug/l	2	U	2	2	U	2	0%
Chlorobenzene	8260B	ug/l	2	U	2	2	U	2	0%
Chloroethane	8260B	ug/l	5	U	5	5	U	5	0%
Chloroform	8260B	ug/l	2	U	2	2	U	2	0%
Chloromethane	8260B	ug/l	2	U	2	2	U	2	0%
cis-1,2-Dichloroethene	8260B	ug/l	2	U	2	2	U	2	0%
cis-1,3-Dichloropropene	8260B	ug/l	2	U	2	2	U	2	0%
Dibromochloromethane	8260B	ug/l	2	UJ	2	2	UJ	2	0%
Dibromomethane	8260B	ug/l	2	U	2	2	U	2	0%
Dichlorodifluoromethane	8260B	ug/l	5	U	5	5	U	5	0%
Diethyl Ether	8260B	ug/l	5	U	5	5	U	5	0%
Ethylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
Ethyl-t-butyl ether(ETBE)	8260B	ug/l	5	U	5	5	U	5	0%
Hexachlorobutadiene	8260B	ug/l	0.5	U	0.5	0.5	U	0.5	0%
Isopropyl ether(DIPE)	8260B	ug/l	5	U	5	5	U	5	0%
IsoPropylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
Methylene chloride	8260B	ug/l	5	U	5	5	U	5	0%
Methyl-t-butyl ether(MTBE)	8260B	ug/l	5	U	5	5	U	5	0%
mp-Xylene	8260B	ug/l	1	U	1	1	U	1	0%
Naphthalene	8260B	ug/l	5	U	5	5	U	5	0%
n-Butylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
n-Propylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
o-Xylene	8260B	ug/l	1	U	1	1	U	1	0%
p-Isopropyltoluene	8260B	ug/l	1	U	1	1	U	1	0%
sec-Butylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
Styrene	8260B	ug/l	1	U	1	1	U	1	0%
tert-amyl methyl ether(TAME)	8260B	ug/l	5	U	5	5	U	5	0%
tert-Butyl Alcohol (TBA)	8260B	ug/l	30	U	30	30	U	30	0%
tert-Butylbenzene	8260B	ug/l	1	U	1	1	U	1	0%
Tetrachloroethene	8260B	ug/l	2	U	2	2	U	2	0%

Table 6

Duplicate Comparisons

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Sample ID			SW-SW-5			SW-SW-5-DUP			
Sample Collection Date			5/2/2017			5/2/2017			
Laboratory Sample ID			168160.22			168160.24			**Relative Percent**
Parameter	**Method**	**Units**	**Result**	**Flag**	**RL**	**Result**	**Flag**	**RL**	**Difference (RPD)**
Tetrahydrofuran(THF)	8260B	ug/l	10	U	10	10	U	10	0%
Toluene	8260B	ug/l	1	U	1	1	U	1	0%
trans-1,2-Dichloroethene	8260B	ug/l	2	U	2	2	U	2	0%
trans-1,3-Dichloropropene	8260B	ug/l	2	UJ	2	2	UJ	2	0%
Trichloroethene	8260B	ug/l	2	U	2	2	U	2	0%
Trichlorofluoromethane	8260B	ug/l	5	U	5	5	U	5	0%
Vinyl chloride	8260B	ug/l	2	U	2	2	U	2	0%
Ammonia-N	TM NH3-001	mg/L	0.05	U	0.05	0.05	U	0.05	0%
1,4-Dioxane	8260B SIM	ug/l	0.59			0.63			7%
Perfluorobutanesulfonic acid (PFBS)	537 Modified	ng/L	2.3	U	2.3	2.07	U	2.07	11%
Perfluoroheptanoic acid (PFHpA)	537 Modified	ng/L	222			218			2%
Perfluorohexanesulfonic acid (PFHxS)	537 Modified	ng/L	13.8	J		13.3	J		4%
Perfluorooctanoic acid (PFOA)	537 Modified	ng/L	794	J		742	J		7%
Perfluorononanoic acid (PFNA)	537 Modified	ng/L	296			308			4%
Perfluorooctanesulfonic (PFOS)	537 Modified	ng/L	391	JD		770	JD		65%
Combination of PFOA and PFOS			1185			1512			24%

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Table 6
Duplicate Comparisons
Coakley Landfill Superfund Site
North Hampton and Greenland, New Hampshire

Sample ID			S-SED-5			S-SED-5-DUP			
Sample Collection Date			5/2/2017			5/2/2017			
Laboratory Sample ID			168160.23			168160.25			**Relative Percent**
Parameter	**Method**	**Units**	**Result**	**Flag**	**RL**	**Result**	**Flag**	**RL**	**Difference (RPD)**
Solids Total	2540G-91	Percent	23.6			22.7			4%
Total Aluminum	6020	mg/kg	11000			12000			9%
Total Antimony	6020	mg/kg	1.9			2			5%
Total Arsenic	6020	mg/kg	12			13			8%
Total Barium	6020	mg/kg	110			120			9%
Total Beryllium	6020	mg/kg	0.7			0.7			0%
Total Cadmium	6020	mg/kg	0.6			0.6			0%
Total Calcium	6020	mg/kg	7000			7700			10%
Total Chromium	6020	mg/kg	23			23			0%
Total Cobalt	6020	mg/kg	6.9			7.7			11%
Total Copper	6020	mg/kg	36			37			3%
Total Iron	6020	mg/kg	15000			16000			6%
Total Lead	6020	mg/kg	68			65			5%
Total Magnesium	6020	mg/kg	3000			3100			3%
Total Manganese	6020	mg/kg	290			310			7%
Total Mercury	6020	mg/kg	0.5			1			67%
Total Nickel	6020	mg/kg	20			21			5%
Total Potassium	6020	mg/kg	2900			2900			0%
Total Selenium	6020	mg/kg	1.5			1.5			0%
Total Silver	6020	mg/kg	0.5	U	0.5	0.5	U	0.5	0%
Total Sodium	6020	mg/kg	300			300			0%
Total Thallium	6020	mg/kg	0.5	U	0.5	0.5	U	0.5	0%
Total Vanadium	6020	mg/kg	37			37			0%
Total Zinc	6020	mg/kg	80			82			2%
1,4-Dioxane	8260B SIM	ug/l	0.4	U	0.4	0.5	U	0.5	22%
Perfluorobutanesulfonic acid (PFBS)	537 Modified	ng/L	1.22	U	1.22	1.23	U	1.23	1%
Perfluoroheptanoic acid (PFHpA)	537 Modified	ng/L	3.37	J		3.5	J		4%
Perfluorohexanesulfonic acid (PFHxS)	537 Modified	ng/L	1.29	U	1.29	1.3	UJ	1.3	1%
Perfluorooctanoic acid (PFOA)	537 Modified	ng/L	16.9			17.1	J		1%
Perfluorononanoic acid (PFNA)	537 Modified	ng/L	20.9			22.5			7%
Perfluorooctanesulfonic (PFOS)	537 Modified	ng/L	152	JD		164	JD		8%
Combination of PFOA and PFOS			168.9			181.1			7%

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TABLE 7
Statistical and Visual Trend Analysis Results
2017 Bi-Annual Report - Coakley Landfill, North Hampton, New Hampshire

Well	1,4-dioxane		Benzene		Tertiary-butyl Alcohol (TBA)		Arsenic		Manganese	
	Statistical Trend	Visual Trend	Statistical Trend	Visual Trend	Statistical Trend	Visual Trend	Statistical Trend	Visual Trend	Statistical Trend	Visual Trend
Operating Unit 1 Wells										
BP-4	No Trend	Stable	NA	NA	NA	NA	No Trend	Decreasing	Decreasing	Not Stable
MW-4	No Trend	Stable	NA	NA	NA	NA	No Trend	Stable	Decreasing	Stable
MW-5D	No Trend	Decreasing	No Trend	Stable	No Trend	Stable	No Trend	Decreasing	No Trend	Decreasing
MW-5S	Decreasing	Decreasing	No Trend	Stable	ND	ND	No Trend	Stable	Decreasing	Decreasing
MW-6	ND	ND	ND	ND	ND	ND	NP	NP	No Trend	Decreasing
MW-8	No Trend	Stable	No Trend	Decreasing	Decreasing	Stable	No Trend	Decreasing	Decreasing	Decreasing
MW-9	No Trend	Not Stable	NA	NA	NA	NA	No Trend	Decreasing	No Trend	Decreasing
MW-10	NA	NA	NA	NA	NA	NA	No Trend	Decreasing	Decreasing	Decreasing
MW-11	Decreasing	Decreasing	Decreasing	Stable	ND	ND	No Trend	Increasing	No Trend	Increasing
OP-2	NP	NP	NA	NA	NA	NA	No Trend	Decreasing	Increasing	Increasing
OP-5	NA	NA	NA	NA	NA	NA	No Trend	Increasing	No Trend	Not Stable
Operating Unit 2 Wells										
AE-1A	NA	NA	NA	NA	NA	NA	Decreasing	Stable	Increasing	Increasing
AE-1B	NA	NA	NA	NA	NA	NA	Increasing	Stable	No Trend	Decreasing
AE-2A	No Trend	Decreasing	ND	ND	ND	ND	Decreasing	Decreasing	Increasing	Increasing
AE-2B	No Trend	Stable	ND	ND	ND	ND	Decreasing	Decreasing	Decreasing	Decreasing
AE-3A	No Trend	Stable	Decreasing	Stable	ND	ND	No Trend	Decreasing	Increasing	Increasing
AE-3B	No Trend	Stable	Decreasing	Stable	ND	ND	No Trend	Stable	No Trend	Not Stable
AE-4A	ND	ND	ND	ND	ND	ND	NP	NP	Decreasing	Decreasing
AE-4B	ND	ND	ND	ND	ND	ND	NP	NP	Decreasing	Stable
FPC-4B	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
FPC-5B	No Trend	Decreasing	NA	NA	NA	NA	NP	NP	NP	NP
FPC-6A	No Trend	Decreasing	Decreasing	Stable	ND	ND	Increasing	Decreasing	No Trend	Decreasing
FPC-6B	Decreasing	Decreasing	Decreasing	Stable	ND	ND	Decreasing	Stable	Decreasing	Stable
FPC-7A	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
FPC-7B	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
FPC-8A	No Trend	Stable	ND	ND	ND	ND	ND	ND	ND	NP
FPC-8B	Decreasing	Stable	ND	ND	ND	ND	NP	NP	NP	NP
FPC-9A	NA	NA	NA	NA	NA	NA	Increasing	Increasing	No Trend	Decreasing
FPC-11A	NA	NA	NA	NA	NA	NA	NP	NP	No Trend	Stable
FPC-11B	NP*	NP*	NA	NA	NA	NA	NP	NP	Decreasing	Not Stable
GZ-105	No Trend	Not Stable	Decreasing	Stable	ND	ND	No Trend	Not Stable	NP	NP
Trend Tests Completed	16		11		2		23		24	
Trends Identified	0		7		1		9		13	
Increasing Trends	0		1		0		7		6	
Decreasing Trends	0		6		1		2		7	
No Trend	16		4		1		14		11	

NOTES:

NA	Parameter Not Analyzed
ND	Parameter Not Detected
NP	Not Performed, trend analysis not performed because parameter has not recently exceeded USEPA ICL or NHDES AGQS.
NP*	Not Performed, data from at least 5 sampling events are required for Mann Kendall statistical analysis or visual trend analysis.
1.	Wells with screened interval longer than 10 feet were interval sampled in August 2013 (MW-5D, MW-5S, MW-8, MW-11, AE-3B, FPC-4B, FPC-5B, FPC-6B, FPC-7B, FPC-8B, GZ-105), or September/October 2014 (FPC-11B). Samples collected using the interval sampling method are not considered to be directly comparable to data from low flow purging sampling methods; therefore, the interval sampling data was excluded from the trends analyses - although it is noted that average concentrations for the interval data were used when plotting time series plots.
2.	Mann Kendall trend analysis completed using 95% confidence interval. Possible outcomes include: No Trend, Increasing, or Decreasing.
3.	Visual trend analysis focused on data from last 5 years, in the context of complete data set. Possible outcomes include: Stable, Not Stable, Increasing, or Decreasing.
4.	FPC-5A: Not sampled in 2016; therefore no trend analysis was completed.

TABLE 8
Contaminants of Concern Analytical Data (November 2000 – May 2017)
Antimony in Groundwater
Coakley Landfill Superfund Site
North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-00	Apr-01	Aug-01	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																								
BP-4	< 0.005	< 0.001	NA	< 0.002	< 0.002	< 0.004	< 0.04	< 0.002	< 0.001	NS	< 0.001	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	<0.001	<0.001
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	< 0.02	< 0.005	NA	< 0.004	< 0.004	< 0.004	< 0.012	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-5D	< 0.001	< 0.01	NA	< 0.002	< 0.002	< 0.004	< 0.006	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-5S	< 0.02	< 0.001	NA	< 0.002	< 0.004	< 0.004	< 0.006	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-6	< 0.02	< 0.005	NA	< 0.005	< 0.002	< 0.005	< 0.012	< 0.002	< 0.001	NS	< 0.001	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-8	< 0.02	< 0.005	NA	< 0.002	< 0.004	< 0.004	< 0.006	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-9	< 0.02	< 0.005	NA	0.002	<0.004	**0.007**	< 0.006	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-10	< 0.02	< 0.005	NA	< 0.002	< 0.002	< 0.004	< 0.006	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-11	< 0.02	< 0.005	NA	< 0.002	< 0.002	< 0.004	< 0.006	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
OP-2	< 0.02	< 0.001	NA	< 0.002	< 0.002	< 0.005	< 0.006	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
OP-5	< 0.005	< 0.001	NA	< 0.002	< 0.002	< 0.004	< 0.016	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
Operable Unit 2 Wells																								
AE-1A	< 0.005	< 0.001	NA	< 0.002	0.002	< 0.004	**0.012**	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-1B	< 0.02	< 0.005	NA	< 0.002	< 0.002	< 0.004	< 0.006	< 0.002	NS	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-2A	< 0.005	< 0.001	NA	< 0.002	< 0.002	< 0.005	< 0.006	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-2B	< 0.025	< 0.005	NA	< 0.002	< 0.002	< 0.004	< 0.04	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-3A	< 0.025	< 0.005	NA	< 0.002	< 0.002	< 0.004	< 0.04	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-3B	< 0.025	< 0.01	NA	< 0.002	< 0.002	< 0.004	< 0.016	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-4A	NS	NS	NS	NS	0.005	< 0.005	< 0.008	**0.008**	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-4B	NS	NS	NS	NS	< 0.008	< 0.005	< 0.008	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-2A	NA	< 0.001	NA	NA	< 0.002	< 0.004	< 0.006	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NS	NS	NS	NS	< 0.002	**0.007**	< 0.006	< 0.002	< 0.001	NS	< 0.001	0.002	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	< 0.001
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	< 0.001
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	< 0.001
FPC-4B	NS	NS	NS	NS	< 0.004	< 0.004	< 0.004	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-5A	< 0.025	< 0.001	NA	< 0.002	< 0.002	< 0.004	< 0.004	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	NS	NS	NS	NS
FPC-5B	0.006	< 0.005	NA	< 0.002	< 0.004	< 0.004	< 0.006	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-6A	< 0.005	< 0.001	NS	NS	< 0.008	< 0.004	< 0.006	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-6B	< 0.025	< 0.001	NA	< 0.002	< 0.004	< 0.004	< 0.02	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-7A	NS	NS	NS	NS	< 0.004	NA	< 0.006	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-7B	NS	NS	NS	NS	< 0.004	NA	< 0.006	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-8A	< 0.025	0.005	NA	0.002	< 0.004	< 0.004	< 0.008	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-8B	< 0.005	< 0.001	NA	< 0.004	< 0.002	< 0.004	< 0.008	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-9A	< 0.001	< 0.005	NA	< 0.002	< 0.002	< 0.004	< 0.006	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-9B	< 0.02	NS	NS	< 0.005	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NS	NS	NS	NS	< 0.002	< 0.004	< 0.016	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-11B	NS	NS	NS	NS	0.003	< 0.004	< 0.016	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	INT	<0.001	<0.001	<0.001
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	< 0.001	< 0.005	NA	< 0.002	< 0.004	< 0.004	< 0.04	0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	<0.001	<0.001
GZ-123	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																								
R-3	NS	NA	NS	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS
R-5	NS	NA	NS	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NS	NA	NA	NA	NS
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NA	NA	NS

Table Notes:
All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8
1. NHDES Ambient Groundwater Quality Standard (AGQS) for Antimony is 0.006 mg/L. Exceedances are identified with GRAY shading.
2. EPA Cleanup Level (CL) for Antimony is 0.006 mg/L. Exceedances are identified with BOLD text.
3. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)
4. FPC-3 series December 2016 data is reported in May 2016.
5.

Abbreviations:
NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

Arsenic in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-00	Apr-01	Aug-01	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																								
BP-4	**0.035**	**0.02**	**0.031**	**0.036**	**0.032**	**0.022**	**0.011**	**0.026**	**0.03**	NS	**0.023**	**0.022**	NS	**0.034**	**0.033**	**0.034**	NS	NS	**0.032**	NS	**0.025**	**0.017**	<0.001	**0.039**
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	**0.06**	**0.042**	**0.064**	**0.041**	**0.04**	**0.066**	**0.13**	**0.043**	**0.058**	NS	**0.069**	**0.07**	**0.064**	NS	**0.081**	**0.08**	NS	NS	**0.053**	NS	**0.063**	**0.05**	**0.045**	**0.046**
MW-5D	0.009	0.007	0.008	0.006	0.007	0.005	0.006	0.005	**0.011**	NS	0.005	0.006	0.01	NS	0.01	**0.011**	NS	NS	INT	NS	0.009	0.01	0.01	0.0009
MW-5S	**0.018**	**0.021**	**0.023**	**0.026**	0.01	**0.015**	**0.014**	0.01	**0.026**	NS	**0.026**	**0.018**	**0.016**	NS	**0.018**	**0.017**	NS	NS	INT	NS	**0.022**	**0.017**	**0.02**	**0.02**
MW-6	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001 J	< 0.002	< 0.004	< 0.002	< 0.001	NS	< 0.001	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	NS	0.002	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-8	0.01	**0.011**	**0.043**	0.009	0.008	0.006	0.01	0.007	0.01	NS	0.008	0.008	**0.013**	NS	**0.016**	**0.018**	NS	NS	INT	NS	0.009	**0.011**	0.007	0.007
MW-9	**0.069**	**0.063**	**0.15**	**0.14**	**0.12**	**0.06**	**0.28**	**0.081**	**0.056**	NS	**0.057**	**0.078**	**0.12**	NS	**0.13**	**0.14**	NS	NS	**0.046**	NS	**0.12**	**0.14**	**0.027**	<0.001
MW-10	0.01	0.003	**0.032**	**0.028**	0.011 J	**0.033**	**0.024**	**0.011**	**0.012**	NS	0.009	**0.017**	**0.019**	NS	**0.012**	**0.019**	NS	NS	**0.015**	NS	**0.022**	**0.014**	0.01	<0.001
MW-11	0.01	**0.014**	**0.02**	**0.017**	**0.015**	**0.011**	**0.012**	0.01	**0.015**	NS	**0.013**	**0.011**	**0.011**	NS	0.008	0.009	NS	NS	INT	NS	**0.013**	**0.014**	**0.013**	**0.013**
OP-2	**0.2**	**0.17**	**0.29**	**0.26**	**0.27**	**0.19**	**0.025**	**0.2**	**0.19**	NS	**0.17**	**0.2**	**0.22**	NS	**0.21**	**0.22**	NS	NS	**0.2**	NS	**0.23**	**0.22**	**0.18**	**0.15**
OP-5	**0.05**	**0.027**	**0.043**	**0.048**	**0.046**	**0.033**	**0.025**	**0.027**	**0.033**	NS	**0.017**	**0.013**	**0.019**	NS	**0.027**	**0.03**	NS	NS	**0.03**	NS	**0.048**	**0.044**	**0.056**	**0.023**
Operable Unit 2 Wells																								
AE-1A	**0.017**	**0.018**	**0.017**	**0.018**	**0.02**	**0.022**	**0.02**	**0.015**	**0.039**	NS	**0.041**	**0.029**	**0.02**	NS	**0.022**	**0.018**	NS	NS	**0.018**	NS	**0.014**	**0.016**	**0.015**	**0.017**
AE-1B	0.004	0.005	0.005	0.005	0.004 J	0.004	0.003	< 0.002	NS	NS	0.003	0.004	0.006	NS	0.006	0.007	NS	NS	0.008	NS	0.008	0.008	0.007	0.008
AE-2A	**0.29**	**0.3**	**0.34**	**0.29**	**0.33**	**0.29**	**0.3**	**0.24**	**0.28**	NS	**0.23**	**0.24**	**0.24**	NS	**0.25**	**0.24**	NS	NS	**0.19**	NS	**0.012**	**0.19**	**0.13**	**0.13**
AE-2B	**0.026**	**0.013**	**0.016**	**0.011**	**0.018**	**0.016**	**0.025**	**0.024**	**0.02**	NS	**0.019**	**0.026**	**0.016**	NS	**0.028**	**0.02**	NS	NS	**0.02**	NS	**0.014**	**0.012**	0.006	0.004
AE-3A	**0.1**	**0.09**	**0.13**	**0.11**	**0.11**	**0.11**	**0.12**	**0.1**	**0.13**	NS	**0.15**	**0.12**	**0.12**	NS	**0.11**	**0.11**	NS	NS	**0.14**	NS	**0.13**	**0.13**	**0.11**	**0.093**
AE-3B	**0.093**	**0.083**	**0.11**	**0.073**	0.084 J	**0.092**	**0.078**	**0.091**	**0.082**	NS	**0.095**	**0.091**	**0.079**	NS	**0.083**	**0.088**	NS	NS	INT	NS	**0.087**	**0.061**	**0.091**	**0.076**
AE-4A	NS	NS	NS	NS	< 0.002 JM	< 0.002	< 0.002	< 0.002	0.003	NS	0.01	0.003	0.002	NS	0.001	0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-4B	NS	NS	NS	NS	0.003	< 0.002	< 0.002	< 0.002	0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-2A	< 0.005	0.001	< 0.001	NA	0.001	< 0.002	0.005	< 0.002	0.008	NS	0.003	0.002	0.002	NS	0.002	0.002	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NS	NS	NS	NS	0.004	< 0.002	0.004	< 0.002	0.002	NS	0.003	0.003	0.003	NS	0.003	0.002	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**0.012**	0.008
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.003	0.003
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**0.013**	**0.013**
FPC-4B	NS	NS	NS	NS	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-5A	< 0.001	0.001	**0.046**	**0.054**	0.008	**0.045**	**0.065**	**0.042**	**0.053**	NS	**0.054**	**0.053**	**0.055**	NS	**0.051**	**0.053**	NS	NS	**0.052**	NS	NS	NS	NS	NS
FPC-5B	**0.031**	**0.034**	0.002	0.001	0.038 J	< 0.002	0.004	< 0.002	0.004	NS	0.001	0.001	0.003	NS	0.002	0.002	NS	NS	0.002	NS	0.002	0.002	0.003	0.003
FPC-6A	< 0.005	< 0.001	NS	NS	0.009	< 0.002	0.003	< 0.002	0.003	NS	0.002	**0.013**	**0.03**	NS	0.009	**0.037**	NS	NS	**0.018**	NS	**0.038**	**0.032**	**0.011**	0.005
FPC-6B	0.003	0.006	0.006	0.003	< 0.002 J	**0.013**	**0.05**	0.005	0.009	NS	**0.014**	0.002	0.003	NS	0.005	0.004	NS	NS	INT	NS	0.003	0.003	0.002	0.001
FPC-7A	NS	NS	NS	NS	< 0.001 J	< 0.004	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-7B	NS	NS	NS	NS	< 0.001 J	0.007	0.002	< 0.002	< 0.001	NS	0.002	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-8A	0.003	0.004	0.007	0.008	0.004	< 0.002	0.008	<0.002	0.004	NS	0.002	0.006	0.007	NS	0.008	0.006	NS	NS	0.002	NS	0.001	0.001	<0.001	<0.001
FPC-8B	0.007	0.008	0.008	0.008	0.009	0.004	0.005	0.005	0.007	NS	0.007	0.007	0.007	NS	0.008	0.007	NS	NS	INT	NS	0.008	0.007	0.006	0.007
FPC-9A	**0.07**	**0.53**	**0.065**	**0.079**	**0.064**	< 0.002	< 0.002	**0.044**	**0.037**	NS	**0.026**	**0.034**	**0.036**	NS	**0.042**	**0.041**	NS	NS	**0.045**	NS	**0.058**	**0.048**	**0.044**	**0.047**
FPC-9B	< 0.002	NS	NS	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NS	NS	NS	NS	0.002 J	< 0.002	< 0.004	< 0.002	0.001	NS	0.001	< 0.001	0.009	NS	0.008	0.007	NS	NS	NS	NS	0.004	0.003	0.002	**0.019**
FPC-11B	NS	NS	NS	NS	0.03 J	0.008	**0.011**	0.006	0.009	NS	0.008	0.01	0.01	NS	0.004	0.003	NS	NS	NS	NS	INT	0.004	0.003	0.002
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	**0.018**	0.008	**0.012**	**0.013**	0.009	0.01	0.009	0.006	**0.011**	NS	0.01	**0.013**	**0.015**	NS	**0.016**	**0.015**	NS	NS	INT	NS	**0.012**	0.008	0.008	**0.014**
GZ-123	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	NS	< 0.001	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																								
R-3	NS	NA	NS	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS	NA	NA	NA	NS	NA	< 0.001	< 0.001	< 0.001	< 0.001	<0.001
R-5	NS	NA	NS	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NS	< 0.001	< 0.001	< 0.001	<0.001
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	< 0.001	< 0.001	0.002	NA	<0.001
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	< 0.001	< 0.001	< 0.001	<0.001

Table Notes:

All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8

1. NHDES Ambient Groundwater Quality Standard (AGQS) for Arsenic is 0.01 mg/L. Exceedances are identified with GRAY shading.
2. EPA Cleanup Level (CL) for Arsenic is 0.01 mg/L. Exceedances are identified with BOLD text.
3. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)
4. Residential results for January 2107 are reported for the May 2107 data.
5. FPC-3 series December 2016 data is reported in May 2016.
6.

Abbreviations:

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

Beryllium in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-00	Apr-01	Aug-01	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																								
BP-4	< 0.005	< 0.002	NA	< 0.004	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	< 0.001	< 0.002	NA	< 0.004	< 0.004	< 0.002	< 0.002	< 0.002	0.003	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-5D	< 0.01	0.002	NA	< 0.02	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-5S	< 0.01	< 0.02	NA	< 0.02	< 0.02	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-6	< 0.005	< 0.002	NA	< 0.004	< 0.004 J	< 0.002	**0.006**	< 0.002	< 0.001	NS	< 0.001	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-8	< 0.005	< 0.002	NA	< 0.02	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-9	< 0.001	< 0.002	NA	< 0.004	< 0.004	< 0.002	< 0.002 M	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-10	< 0.005	< 0.002	NA	< 0.004	< 0.004 J	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-11	< 0.005	< 0.002	NA	< 0.02	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
OP-2	< 0.001	< 0.002	NA	< 0.004	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
OP-5	< 0.005	< 0.002	NA	< 0.004	< 0.004	< 0.002	< 0.004	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
Operable Unit 2 Wells																								
AE-1A	< 0.005	< 0.002	NA	< 0.004	< 0.004 J	< 0.002	**0.006**	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-1B	< 0.005	< 0.002	NA	< 0.004	< 0.004	< 0.002	< 0.002	< 0.002	NS	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-2A	< 0.005	< 0.002	NA	< 0.008	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-2B	< 0.01	< 0.002	NA	< 0.004	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-3A	< 0.001	< 0.004	NA	< 0.004	< 0.004 J	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-3B	< 0.001	< 0.004	NA	< 0.004	< 0.004 J	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-4A	NS	NS	NS	NS	< 0.008 M	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-4B	NS	NS	NS	NS	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-2A	NA	< 0.002	NA	NA	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NS	NS	NS	NS	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	< 0.001
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	< 0.001
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	< 0.001
FPC-4B	NS	NS	NS	NS	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-5A	< 0.001	< 0.002	NA	< 0.004	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	NS	NS	NS	NS
FPC-5B	< 0.001	< 0.002	NA	< 0.004	< 0.004 J	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-6A	< 0.005	< 0.002	NS	NS	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-6B	< 0.001	< 0.002	NA	< 0.004	< 0.004	< 0.002	< 0.1	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-7A	NS	NS	NS	NS	< 0.004 J	NA	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-7B	NS	NS	NS	NS	< 0.004 J	NA	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-8A	< 0.001	< 0.002	NA	< 0.004	< 0.004 J	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-8B	< 0.005	< 0.002	NA	< 0.008	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-9A	< 0.005	< 0.002	NA	< 0.004	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-9B	< 0.005	NS	NS	< 0.004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NS	NS	NS	NS	< 0.004 J	< 0.002	**0.006**	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-11B	NS	NS	NS	NS	< 0.004 J	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	INT	<0.001	<0.001	<0.001
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	< 0.005	< 0.002	NA	< 0.008	< 0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
GZ-123	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																								
R-3	NS	NA	NS	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS
R-5	NS	NA	NS	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NS	NA	NA	NA	NS
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NA	NA	NS

Table Notes:

All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8

1. NHDES Ambient Groundwater Quality Standard (AGQS) for Beryllium is 0.004 mg/L. Exceedances are identified with GRAY shading.
2. EPA Cleanup Level (CL) for Beryllium is 0.004 mg/L. Exceedances are identified with BOLD text.
3. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)
4. FPC-3 series December 2016 data is reported in May 2016.
5.

Abbreviations:

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

Chromium in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-00	Apr-01	Aug-01	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																								
BP-4	< 0.005	0.002	NA	0.001	0.002	< 0.002	0.015	< 0.002	< 0.001	NS	< 0.001	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	0.042	< 0.002	NA	0.006	0.032	< 0.002	**0.6**	**0.15**	**0.14**	NS	**0.19**	0.002	< 0.001	NS	0.001	< 0.001	NS	NS	0.003	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-5D	< 0.005	< 0.02	NA	0.001	0.002	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-5S	< 0.015	0.002	NA	0.002	0.004	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-6	< 0.015	< 0.02	NA	< 0.002	< 0.002	< 0.002	< 0.004	< 0.002	< 0.001	NS	< 0.001	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-8	< 0.015	< 0.02	NA	0.001	0.004	< 0.002	0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	0.002
MW-9	< 0.015	< 0.02	NA	0.014	0.007	0.005	0.003	< 0.004	< 0.001	NS	< 0.001	< 0.001	0.001	NS	< 0.001	0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-10	< 0.015	< 0.02	NA	0.001	0.005	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	0.002	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-11	< 0.015	< 0.02	NA	0.002	0.002	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
OP-2	< 0.015	0.003	NA	0.002	0.003	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
OP-5	< 0.005	< 0.001	NA	< 0.001	< 0.001	< 0.002	0.007	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
Operable Unit 2 Wells																								
AE-1A	< 0.005	0.001	NA	< 0.001	0.016	< 0.002	0.005	< 0.002	0.005	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	0.008	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-1B	< 0.015	< 0.02	NA	0.003	0.002	< 0.002	< 0.002	< 0.002	NS	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-2A	< 0.005	0.002	NA	< 0.002	0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-2B	**0.13**	0.03	NA	0.013	0.003	0.002	< 0.01	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-3A	< 0.02	< 0.02	NA	0.017	0.006	< 0.002	< 0.002	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	0.003	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-3B	< 0.02	< 0.02	NA	0.005	0.009	< 0.002	< 0.004	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-4A	NS	NS	NS	NS	0.0042	< 0.002	0.005	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-4B	NS	NS	NS	NS	**0.34**	< 0.002	0.004	< 0.004	0.003	NS	0.002	< 0.001	0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-2A	NA	< 0.001	NA	NA	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NS	NS	NS	NS	< 0.001	0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.003	< 0.001
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	< 0.001
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	< 0.001
FPC-4B	NS	NS	NS	NS	0.003	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-5A	< 0.02	0.001	NA	0.002	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	NS	NS	NS	NS
FPC-5B	< 0.02	< 0.02	NA	< 0.001	0.005	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-6A	< 0.005	0.001	NS	NS	0.013	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-6B	< 0.02	0.001	NA	< 0.001	0.001	0.008	0.008	< 0.004	0.003	NS	0.002	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-7A	NS	NS	NS	NS	0.003	< 0.004	< 0.002	< 0.002	0.002	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-7B	NS	NS	NS	NS	0.002	**0.067**	< 0.002	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-8A	0.013	< 0.02	NA	0.023	0.008	< 0.002	0.01	<0.004	< 0.001	NS	< 0.001	0.006	0.006	NS	0.003	0.003	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-8B	< 0.005	< 0.001	NA	< 0.002	< 0.001	< 0.002	0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-9A	< 0.005	< 0.02	NA	< 0.001	0.001	< 0.002	< 0.002	< 0.002	0.002	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-9B	< 0.015	NS	NS	0.002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NS	NS	NS	NS	0.006	< 0.002	0.024	< 0.004	0.002	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-11B	NS	NS	NS	NS	0.046	< 0.002	**0.14**	0.016	< 0.001	NS	0.002	< 0.001	< 0.001	NS	0.016	< 0.001	NS	NS	NS	NS	INT	<0.001	<0.001	<0.001
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	< 0.005	< 0.02	NA	0.002	0.004	< 0.002	< 0.002	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
GZ-123	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																								
R-3	NS	NA	NS	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS
R-5	NS	NA	NS	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NS	NA	NA	NA	NS
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NA	NA	NS

Table Notes:

All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8

1. NHDES Ambient Groundwater Quality Standard (AGQS) for Chromium is 0.1 mg/L. Exceedances are identified with GRAY shading.
2. EPA Cleanup Level (CL) for Chromium is 0.05 mg/L. Exceedances are identified with BOLD text.
3. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)
4. FPC-3 series December 2016 data is reported in May 2016.
5.

Abbreviations:

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

Lead in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-00	Apr-01	Aug-01	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																								
BP-4	< 0.005	< 0.001	NA	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	NS	0.004	0.01	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	0.002	< 0.005	NA	< 0.001	< 0.002	< 0.002	**0.1**	**0.023**	**0.037**	NS	**0.043**	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	0.002	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-5D	< 0.005	< 0.002	NA	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-5S	< 0.002	< 0.001	NA	< 0.01	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-6	< 0.002	< 0.005	NA	< 0.002	< 0.001	< 0.002	< 0.004	< 0.002	< 0.001	NS	< 0.001	< 0.001	NS	0.003	0.001	0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-8	< 0.002	< 0.01	NA	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-9	< 0.002	< 0.01	NA	0.002	< 0.001	< 0.002	< 0.002	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-10	< 0.002	< 0.01	NA	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
MW-11	< 0.002	< 0.01	NA	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
OP-2	< 0.002	< 0.001	NA	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	0.006	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
OP-5	< 0.005	< 0.001	NA	< 0.001	< 0.001	< 0.002	0.003	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
Operable Unit 2 Wells																								
AE-1A	< 0.005	< 0.001	NA	< 0.001	0.001	< 0.002	< 0.004	< 0.002	0.015	NS	0.003	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	0.004	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-1B	< 0.002	< 0.005	NA	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	NS	NS	< 0.001	< 0.001	< 0.001	NS	0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	0.002	< 0.001	< 0.001
AE-2A	< 0.005	< 0.001	NA	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-2B	**0.017**	< 0.005	NA	< 0.02	< 0.001	< 0.002	< 0.01	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-3A	< 0.001	< 0.002	NA	0.007	< 0.001	< 0.002	< 0.002	< 0.004	< 0.001	NS	0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-3B	< 0.001	< 0.002	NA	< 0.001	< 0.001	< 0.002	< 0.004	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-4A	NS	NS	NS	NS	0.007	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-4B	NS	NS	NS	NS	**0.05**	< 0.002	< 0.002	< 0.004	0.002	NS	0.002	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-2A	NA	< 0.001	NA	NA	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NS	NS	NS	NS	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	0.003	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	< 0.001
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	< 0.001
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	< 0.001
FPC-4B	NS	NS	NS	NS	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-5A	< 0.001	< 0.001	NA	< 0.005	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
FPC-5B	< 0.001	< 0.01	NA	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-6A	< 0.005	< 0.001	NA	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-6B	< 0.001	< 0.001	NA	< 0.001	< 0.001	< 0.002	< 0.01 J	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-7A	NS	NS	NS	NS	< 0.001	< 0.004	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-7B	NS	NS	NS	NS	< 0.001	**0.018**	< 0.002	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-8A	0.001	< 0.01	NA	0.003	< 0.001	< 0.002	< 0.002	< 0.004	< 0.001	NS	< 0.001	0.001	0.002	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-8B	< 0.005	< 0.001	NA	< 0.002	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	0.004
FPC-9A	< 0.005	< 0.005	NA	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-9B	< 0.002	NS	NS	< 0.002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NS	NS	NS	NS	< 0.001	< 0.002	< 0.004	< 0.004	0.002	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-11B	NS	NS	NS	NS	0.007	< 0.002	< 0.004	0.006	0.001	NS	< 0.001	< 0.001	< 0.001	NS	0.006	< 0.001	NS	NS	NS	NS	INT	<0.001	<0.001	<0.001
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	< 0.005	< 0.01	NA	< 0.002	< 0.001	< 0.002	< 0.002	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
GZ-123	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	NS	< 0.001	< 0.001	NS	0.002	0.004	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																								
R-3	NS	NA	NS	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS
R-5	NS	NA	NS	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NS	NA	NA	NA	NS
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NA	NA	NS

Table Notes:

All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8

1. NHDES Ambient Groundwater Quality Standard (AGQS) for Lead is 0.015 mg/L. Exceedances are identified with GRAY shading.
2. EPA Cleanup Level (CL) for Lead is 0.015 mg/L. Exceedances are identified with BOLD text.
3. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)
4. FPC-3 series December 2016 data is reported in May 2016.
5.

Abbreviations:

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

Manganese in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-00	Apr-01	Aug-01	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																								
BP-4	**1.4**	**1.7**	**1.5**	**1.3**	**1.4**	**1.3**	**1.7**	**1.3**	**1.2**	NS	**1.1**	0.094	NS	**1.2**	**1.1**	**1.2**	NS	NS	**0.96**	NS	**0.69**	**0.49**	**0.36**	**1.2**
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	**1.5**	**1.6**	**1.4**	**1.3**	**1.7**	**1.4**	**13**	**4.5**	**5.9**	NS	**5.8**	**1.2**	**1.1**	NS	**1.3**	**1.2**	NS	NS	**0.97**	NS	**1.2**	**0.9**	**1**	**1.2**
MW-5D	**0.92**	**1.2**	**0.92**	**0.86**	**0.88**	**0.87**	**0.89**	**0.89**	**0.86**	NS	**0.78**	**0.77**	**0.73**	NS	**0.78**	**0.96**	NS	NS	INT	NS	**0.79**	**0.7**	**0.74**	**0.8**
MW-5S	**3.4**	**3.1**	**3.2**	**3.5**	**4.1**	**3.8**	**3.6**	**3.7**	**4.4**	NS	**3.9**	**3.4**	**2.9**	NS	**2.9**	**3.6**	NS	NS	INT	NS	**3.3**	**2.4**	**3**	**2.9**
MW-6	0.08	**0.6**	**1.2**	**1.2**	**1.1**	**0.7**	**0.97**	**0.54**	**0.74**	NS	**0.52**	**0.49**	NS	**1.9**	**1.8**	**2.5**	NS	NS	**0.99**	NS	**2.7**	**2.2**	**1.6**	**0.84**
MW-8	**3.6**	**3.2**	**9.8**	**2.8**	**2.9**	**2.4**	**2.5**	**2.5**	**1.6**	NS	**1.9**	**2**	**2.1**	NS	**1.7**	**2.2**	NS	NS	INT	NS	**1.3**	**1.1**	**1.2**	**1.3**
MW-9	**1.1**	**0.88**	**1**	**1.1**	**1.3**	**1.1**	**0.71**	**2.4**	**1.2**	NS	**3.5**	**2.1**	**1.4**	NS	**0.88**	**1.4**	NS	NS	**1.3**	NS	**1.4**	**1.2**	**0.89**	0.083
MW-10	**1.9**	**0.91**	**3.9**	**4.4**	**8.1**	**3.9**	**3.5**	**3.2**	**2.8**	NS	**0.76**	**2.2**	**2.7**	NS	**1.6**	**3**	NS	NS	**1.7**	NS	**2.3**	**1.9**	**1.5**	0.14
MW-11	**0.95**	**0.78**	**0.71**	**0.6**	**0.6**	**0.59**	**0.53**	**0.45**	**0.41**	NS	**0.44**	**0.39**	**0.34**	NS	**0.35**	**0.41**	NS	NS	INT	NS	**0.43**	**0.45**	**0.47**	**0.49**
OP-2	**0.45**	**0.5**	0.29	**0.33**	**0.36**	**0.38**	**0.39**	**0.47**	**0.62**	NS	**0.58**	**0.63**	**0.76**	NS	**1**	**1**	NS	NS	**0.98**	NS	**1.2**	**1**	**1.6**	**2**
OP-5	**6.7**	**4.9**	**5.6**	**5.2**	**3.9**	**3.5**	**3.8**	**2.5**	**3.8**	NS	**2.3**	**1.8**	**2.2**	NS	**2.7**	**3.7**	NS	NS	**3.1**	NS	**4.3**	**3**	**4.7**	**2.6**
Operable Unit 2 Wells																								
AE-1A	0.16	0.21	**0.31**	**0.35**	**0.38**	0.28	0.25	**0.44**	0.13	NS	0.014	0.25	**0.38**	NS	**0.39**	**0.5**	NS	NS	**0.47**	NS	**0.46**	**0.44**	**0.51**	**0.48**
AE-1B	**0.64**	**0.62**	**0.61**	**0.61**	**0.66**	**0.65**	**0.72**	**0.64**	NS	NS	0.3	**0.73**	**0.53**	NS	**0.56**	**0.59**	NS	NS	**0.49**	NS	**0.53**	**0.45**	**0.51**	**0.57**
AE-2A	**0.65**	**0.83**	**0.74**	**0.95**	**0.83**	**0.76**	**0.72**	**0.51**	**0.77**	NS	**0.61**	**0.65**	**0.7**	NS	**0.74**	**0.82**	NS	NS	**0.81**	NS	**0.81**	**0.77**	**0.83**	**1.1**
AE-2B	**6.4**	**5.1**	**4.4**	**4.4**	**3.7**	**3**	**3.1**	**2.4**	**2.1**	NS	**1.7**	**1.7**	**1.3**	NS	**1.2**	**1.5**	NS	NS	**1.2**	NS	**1.1**	**0.86**	**1.1**	**1.1**
AE-3A	**1.2**	**0.89**	**0.9**	**0.95**	**1.3**	**0.74**	**0.69**	**0.69**	**0.84**	NS	**0.85**	**1.3**	**0.76**	NS	**0.9**	**1.2**	NS	NS	**0.84**	NS	**1**	**0.94**	**1.1**	**1.2**
AE-3B	**2.1**	**2**	**1.4**	**1.4**	**1.5**	**1.1**	**1.1**	**1**	**0.57**	NS	**0.48**	**1.4**	**0.95**	NS	**1.4**	**1.5**	NS	NS	INT	NS	**1.1**	**0.74**	**1.4**	**1.8**
AE-4A	NS	NS	NS	NS	**0.93**	**0.35**	**0.38**	**0.31**	0.29	NS	**0.4**	**0.32**	0.29	NS	**0.47**	**0.42**	NS	NS	**0.38**	NS	0.21	0.13	0.055	0.035
AE-4B	NS	NS	NS	NS	**2.2**	**0.46**	**0.7**	0.22	**1.1**	NS	**0.6**	0.26	0.19	NS	0.22	0.013	NS	NS	0.008	NS	0.018	<0.005	<0.005	<0.005
FPC-2A	**0.74**	**0.92**	**0.68**	**0.67**	**0.6**	**0.59**	**0.57**	**0.67**	**0.8**	NS	**0.62**	**0.73**	**0.5**	NS	**0.55**	**0.63**	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NS	NS	NS	NS	0.035	0.027	0.012	0.018	< 0.001	NS	0.023	0.084	0.021	NS	0.019	0.015	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.027	0.01
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.014	0.013
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.12	0.13
FPC-4B	NS	NS	NS	NS	0.046	0.003	0.079	< 0.003	0.031	NS	0.066	< 0.005	< 0.005	NS	< 0.005	< 0.005	NS	NS	INT	NS	0.006	<0.005	<0.005	<0.005
FPC-5A	0.05	0.055	0.17	0.16	0.074	0.18	0.15	0.14	0.11	NS	0.11	0.11	0.1	NS	0.11	0.14	NS	NS	0.11	NS	NS	NS	NS	NS
FPC-5B	0.2	0.19	0.055	0.07	0.17	0.073	0.076	0.088	0.095	NS	0.074	0.087	0.07	NS	0.056	0.059	NS	NS	INT	NS	0.057	0.047	0.057	0.059
FPC-6A	0.2	0.15	NS	NS	**7.2**	**0.53**	**0.61**	**0.41**	**0.5**	NS	**0.36**	**2.4**	**3.6**	NS	**2.1**	**3.9**	NS	NS	**2.3**	NS	**3.1**	**3.1**	**1.9**	**1.1**
FPC-6B	**0.69**	**0.62**	**0.83**	**0.75**	**0.6**	**5.9**	**6.2**	**2.1**	**3.1**	NS	**3**	**0.34**	**0.4**	NS	**0.38**	**0.47**	NS	NS	INT	NS	**0.39**	**0.44**	**0.37**	**0.45**
FPC-7A	NS	NS	NS	NS	0.014	NA	0.006	< 0.003	0.11	NS	0.034	< 0.005	< 0.005	NS	< 0.005	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
FPC-7B	NS	NS	NS	NS	**0.34**	NA	**0.37**	0.2	0.076	NS	**1.8**	0.11	0.014	NS	0.015	0.009	NS	NS	INT	NS	< 0.005	< 0.005	< 0.005	< 0.005
FPC-8A	**0.46**	**0.35**	**0.44**	**0.41**	0.3	**0.31**	0.26	0.15	0.15	NS	0.062	0.19	0.21	NS	0.26	0.27	NS	NS	0.21	NS	0.17	0.15	0.007	<0.005
FPC-8B	0.023	0.033	0.025	0.033	0.035	0.022	0.03	0.021	0.029	NS	0.028	0.025	0.032	NS	0.032	0.029	NS	NS	INT	NS	0.03	0.024	0.027	0.016
FPC-9A	**0.32**	**0.35**	0.3	**0.34**	**0.42**	0.04	0.03	0.27	**0.41**	NS	**0.52**	0.27	0.22	NS	0.26	**0.31**	NS	NS	0.24	NS	0.18	0.23	0.21	0.21
FPC-9B	0.08	NS	NS	0.053	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NS	NS	NS	NS	**1**	**0.31**	**0.5**	0.022	**0.5**	NS	0.036	0.01	**0.4**	NS	**0.35**	**0.44**	NS	NS	NS	NS	**0.43**	**0.41**	**0.43**	**0.37**
FPC-11B	NS	NS	NS	NS	**3**	**2.2**	**2.5**	**0.88**	**1.3**	NS	**1.4**	**0.71**	**0.52**	NS	0.21	**0.58**	NS	NS	NS	NS	INT	**1.9**	**1.1**	0.27
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	**0.67**	**0.67**	**0.64**	**0.7**	**0.68**	**0.57**	**0.63**	**0.48**	**0.39**	NS	**0.4**	**0.5**	**0.46**	NS	**0.47**	**0.52**	NS	NS	INT	NS	**0.34**	0.23	0.29	**0.42**
GZ-123	NS	NS	NS	NS	NS	NS	NS	NS	**3.3**	NS	**2.3**	**3**	**2.2**	NS	**2.4**	**1.7**	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NS	NS	NS	NS	NS	NS	NS	NS	0.16	NS	0.062	0.081	NS	0.29	0.23	**0.31**	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																								
R-3	NS	NA	NS	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS	NA	NA	NA	NS	NA	0.14	0.1	0.16	0.19	0.19
R-5	NS	NA	NS	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NS	0.29	**0.37**	0.28	0.29
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	0.25	**0.32**	**0.31**	**0.31**	**0.42**
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	0.028	0.03	0.046	0.055

Table Notes:

All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8

1. NHDES Ambient Groundwater Quality Standard (AGQS) for Manganese is 0.84 mg/L. Exceedances are identified with GRAY shading.
2. EPA Cleanup Level (CL) for Manganese is 0.3 mg/L. Exceedances are identified with BOLD text.
3. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)
4. Residential results for January 2107 are reported for the May 2107 data.
5. FPC-3 series December 2016 data is reported in May 2016.
6.

Abbreviations:

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

TABLE 8
Contaminants of Concern Analytical Data (November 2000 – May 2017)
Nickel in Groundwater
Coakley Landfill Superfund Site
North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-00	Apr-01	Aug-01	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																								
BP-4	0.014	0.011	NA	0.009	0.013	0.019	**0.15**	0.009	0.01	NS	0.013	0.008	NS	0.015	0.009	0.008	NS	NS	0.011	NS	0.008	0.005	0.006J	0.008
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	0.039	0.021	NA	0.014	0.032	0.01	**0.41**	0.099	**0.13**	NS	**0.15**	0.009	0.008	NS	0.012	0.006	NS	NS	0.008	NS	0.007	0.009J	0.007J	0.009
MW-5D	0.021	0.021 J	NA	0.017	0.019	0.016	0.017	< 0.002	0.011	NS	0.012	0.01	0.009	NS	0.009	0.009	NS	NS	INT	NS	0.009	0.006	0.008J	0.013
MW-5S	0.027	0.021	NA	0.024	0.023	0.02	0.022	< 0.002	0.022	NS	0.019	0.014	0.011	NS	0.01	0.01	NS	NS	INT	NS	0.013	0.008	0.01J	0.008
MW-6	< 0.002	0.003	NA	< 0.005	0.003	< 0.002	< 0.004	< 0.002	0.003	NS	0.001	0.002	NS	0.002	0.002	0.004	NS	NS	0.002	NS	0.003	0.003	0.003J	0.002
MW-8	0.018	0.018	NA	0.014	0.018	0.019	0.02	0.018	0.019	NS	0.026	0.022	0.017	NS	0.019	0.02	NS	NS	INT	NS	0.021	0.016	0.019J	0.021
MW-9	0.012	0.013	NA	0.028	0.018	0.01	0.014	0.005	0.016	NS	0.007	0.004	0.005	NS	0.005	0.014	NS	NS	0.008	NS	0.009	0.007	0.007J	0.003
MW-10	0.01	0.003	NA	0.012	0.029	0.012	0.014	< 0.002	0.008	NS	0.003	0.005	0.006	NS	0.004	0.005	NS	NS	0.002	NS	0.003	0.004	0.003J	0.002
MW-11	0.019	0.022	NA	0.015	0.014	0.01	0.018	0.008	0.012	NS	0.018	0.008	0.006	NS	0.005	0.005	NS	NS	INT	NS	0.007	0.006	0.005J	0.008
OP-2	0.015	0.012	NA	0.01	0.01	0.008	0.011	0.007	0.007	NS	0.006	0.007	0.009	NS	0.007	0.034	NS	NS	0.006	NS	0.01	0.01	0.01J	0.008
OP-5	0.039	0.022	NA	0.031	0.027	0.028	0.031	< 0.002	0.033	NS	0.03	0.025	0.027	NS	0.024	0.026	NS	NS	0.017	NS	0.015	0.014	0.015J	0.034
Operable Unit 2 Wells																								
AE-1A	< 0.005	< 0.001	NA	< 0.001	0.011	< 0.002	0.005	< 0.002	0.005	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	0.013	NS	< 0.001	< 0.001	< 0.001	< 0.001
AE-1B	0.003	0.001	NA	0.002	0.001	< 0.002	0.002	< 0.002	NS	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	0.001	< 0.001	< 0.001
AE-2A	0.025	0.026	NA	0.03	0.024	0.019	0.018	0.012	0.012	NS	0.012	0.01	0.009	NS	0.008	0.008	NS	NS	0.017	NS	0.007	0.007	0.007J	0.008
AE-2B	0.08	0.028	NA	0.02	0.014	0.016	0.03	0.01	0.013	NS	0.01	0.01	0.009	NS	0.007	0.008	NS	NS	0.008	NS	0.007	0.006	0.008J	0.008
AE-3A	0.016	0.015	NA	0.025	0.015	0.011	0.013	0.008	0.008	NS	0.009	0.008	0.007	NS	0.006	0.007	NS	NS	0.006	NS	0.007	0.006	0.007J	0.006
AE-3B	0.02	0.018	NA	0.014	0.016	0.011	0.014	0.008	0.008	NS	0.009	0.007	0.006	NS	0.005	0.006	NS	NS	INT	NS	0.008	0.006	0.007J	0.006
AE-4A	NS	NS	NS	NS	0.04	< 0.002	0.003	< 0.002	0.007	NS	0.002	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	0.001J	<0.001
AE-4B	NS	NS	NS	NS	0.084	0.004	0.003	< 0.004	0.003	NS	0.002	0.001	0.001	NS	< 0.001	< 0.001	NS	NS	< 0.001	NS	< 0.001	< 0.001	< 0.001	0.003
FPC-2A	< 0.005	< 0.001	NA	NA	< 0.001	< 0.002	0.002	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NS	NS	NS	NS	< 0.001	< 0.002	0.002	< 0.002	< 0.001	NS	< 0.001	0.002	< 0.001	NS	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.002J	<0.001
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.001	<0.001
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.001	<0.001
FPC-4B	NS	NS	NS	NS	0.002	< 0.002	0.002	< 0.002	0.001	NS	0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-5A	0.01	0.004	NA	0.013	0.006	0.011	0.011	0.008	0.004	NS	0.01	0.007	0.007	NS	0.006	0.006	NS	NS	0.006	NS	NS	NS	NS	NS
FPC-5B	0.02	0.017	NA	0.005	0.014	0.005	0.008	0.005	0.008	NS	0.006	0.007	0.006	NS	0.005	0.005	NS	NS	INT	NS	0.006	0.005	0.006J	0.007
FPC-6A	0.008	0.005	NA	NS	0.027	0.004	0.005	< 0.002	0.005	NS	0.002	0.005	0.006	NS	0.005	0.006	NS	NS	0.005	NS	0.006	0.006	0.005J	0.005
FPC-6B	< 0.01	0.004	NA	0.007	0.006	0.017	0.019	< 0.004	0.013	NS	0.008	0.003	0.004	NS	0.004	0.004	NS	NS	INT	NS	0.003	0.003	0.002J	0.004
FPC-7A	NS	NS	NS	NS	0.006	NA	0.006	0.003	0.013	NS	0.007	0.004	0.004	NS	0.003	0.004	NS	NS	0.003	NS	0.003	0.003	0.003J	0.004
FPC-7B	NS	NS	NS	NS	0.003	NA	0.013	< 0.004	0.002	NS	0.018	0.002	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	0.01
FPC-8A	< 0.01	0.004	NA	0.012	0.005	< 0.002	0.007	< 0.004	0.002	NS	< 0.001	0.004	0.005	NS	0.003	0.003	NS	NS	0.001	NS	0.002	<0.001	0.002J	<0.001
FPC-8B	< 0.005	< 0.001	NA	< 0.002	< 0.001	< 0.002	0.003	< 0.002	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.001	NS	NS	INT	NS	< 0.001	< 0.001	< 0.001	< 0.001
FPC-9A	0.01	0.012	NA	0.009	0.008	< 0.002	0.002	0.004	0.003	NS	0.004	0.003	0.003	NS	0.003	0.003	NS	NS	0.004	NS	0.006	0.003	0.005J	0.004
FPC-9B	< 0.002	NS	NS	< 0.005	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NS	NS	NS	NS	0.016	0.01	0.028	0.003	0.009	NS	0.004	0.003	< 0.001	NS	0.001	< 0.001	NS	NS	NS	NS	0.003	<0.001	0.001J	<0.001
FPC-11B	NS	NS	NS	NS	0.05	0.02	**0.15**	< 0.002	0.013	NS	0.012	0.003	< 0.001	NS	0.03	0.002	NS	NS	NS	NS	INT	0.005	0.006J	0.002
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	0.009	0.014	NA	0.01	0.013	0.01	0.015	0.007	0.008	NS	0.009	0.009	0.009	NS	0.008	0.008	NS	NS	INT	NS	0.006	0.004	0.005J	0.007
GZ-123	NS	NS	NS	NS	NS	NS	NS	NS	0.005	NS	0.004	0.005	0.004	NS	0.003	0.002	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	NS	< 0.001	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																								
R-3	NS	NA	NS	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS
R-5	NS	NA	NS	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NS	NA	NA	NA	NS
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NA	NA	NS

Table Notes:
1. All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8
2. NHDES Ambient Groundwater Quality Standard (AGQS) for Nickel is 0.1 mg/L. Exceedances are identified with GRAY shading.
3. EPA Cleanup Level (CL) for Nickel is 0.1 mg/L. Exceedances are identified with BOLD text.
4. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)
5. FPC-3 series December 2016 data is reported in May 2016.

Abbreviations:
NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

Vanadium in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-00	Apr-01	Aug-01	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																								
BP-4	0.013	0.004	NA	< 0.002	0.006	< 0.002	< 0.002	< 0.004	< 0.001	NS	< 0.001	< 0.001	NS	< 0.001	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	0.007	0.004	NA	0.003	0.008	< 0.002	**0.35**	0.063	0.082	NS	0.091	0.002	< 0.001	NS	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
MW-5D	0.004	0.002	NA	< 0.002	0.004	< 0.002	0.003	< 0.004	0.001	NS	0.001	0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	INT	NS	< 0.005	< 0.005	< 0.005	< 0.005
MW-5S	0.001	0.004	NA	< 0.04	< 0.002	0.003	0.004	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	INT	NS	< 0.005	< 0.005	< 0.005	< 0.005
MW-6	< 0.001	< 0.001	NA	< 0.001	< 0.002	< 0.002	< 0.002	< 0.004	< 0.001	NS	< 0.001	< 0.001	NS	< 0.001	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
MW-8	0.001	0.001	NA	< 0.002	< 0.002	< 0.002	0.003	< 0.004	0.001	NS	0.002	0.002	0.001	NS	0.002	< 0.005	NS	NS	INT	NS	< 0.005	< 0.005	< 0.005	< 0.005
MW-9	0.004	0.003	NA	0.009	0.004	0.003	0.007	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
MW-10	< 0.001	0.001	NA	0.002	< 0.002	0.003	0.004	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
MW-11	0.002	0.002	NA	0.002	0.006	0.003	0.003	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	INT	NS	< 0.005	< 0.005	< 0.005	< 0.005
OP-2	0.003	0.005	NA	0.003	0.008	< 0.002	0.004	< 0.004	< 0.001	NS	0.001	0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
OP-5	0.009	0.002	NA	< 0.002	0.003	< 0.002	0.002	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
Operable Unit 2 Wells																								
AE-1A	< 0.002	< 0.001	NA	< 0.002	0.005	< 0.002	< 0.002	< 0.004	0.003	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	0.01	NS	< 0.005	< 0.005	< 0.005	< 0.005
AE-1B	< 0.001	< 0.001	NA	< 0.002	< 0.002	< 0.002	< 0.002	< 0.004	NS	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
AE-2A	0.009	0.004	NA	< 0.004	0.006	0.002	0.004	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
AE-2B	0.076	0.007	NA	0.006	0.009	0.005	< 0.01	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
AE-3A	< 0.002	0.002	NA	< 0.002	0.005	< 0.002	< 0.002	< 0.004	< 0.001	NS	0.001	0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
AE-3B	< 0.002	0.002	NA	< 0.002	0.005	0.004	< 0.002	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	INT	NS	< 0.005	< 0.005	< 0.005	< 0.005
AE-4A	NS	NS	NS	NS	0.039	< 0.002	< 0.002	< 0.002	< 0.001	NS	0.002	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
AE-4B	NS	NS	NS	NS	0.12	< 0.002	< 0.002	< 0.004	0.003	NS	0.002	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
FPC-2A	NA	0.001	NA	NA	< 0.001	< 0.002	< 0.002	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NS	NS	NS	NS	< 0.002	< 0.002	< 0.002	< 0.004	< 0.001	NS	< 0.001	0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.005	< 0.005
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.005	< 0.005
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.005	< 0.005
FPC-4B	NS	NS	NS	NS	< 0.002	< 0.002	< 0.002	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	INT	NS	< 0.005	< 0.005	< 0.005	< 0.005
FPC-5A	< 0.002	0.003	NA	< 0.01	0.002	0.004	< 0.002	< 0.004	< 0.001	NS	0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	< 0.005	NS	NS	NS	NS	NS
FPC-5B	< 0.002	0.003	NA	< 0.002	< 0.002	< 0.002	0.003	< 0.004	0.001	NS	0.001	0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	INT	NS	< 0.005	< 0.005	< 0.005	< 0.005
FPC-6A	< 0.002	0.001	NA	NS	0.006	< 0.002	0.003	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
FPC-6B	< 0.001	0.003	NA	< 0.002	0.004	< 0.002	< 0.004	< 0.004	0.003	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	INT	NS	< 0.005	< 0.005	< 0.005	< 0.005
FPC-7A	NS	NS	NS	NS	< 0.002	NA	< 0.002	< 0.004	0.002	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
FPC-7B	NS	NS	NS	NS	< 0.002	NA	0.002	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	INT	NS	< 0.005	< 0.005	< 0.005	< 0.005
FPC-8A	0.009	0.006	NA	0.016	0.005	< 0.002	0.008	< 0.004	0.001	NS	< 0.001	0.007	0.006	NS	0.002	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
FPC-8B	< 0.002	< 0.001	NA	< 0.004	< 0.002	< 0.002	< 0.002	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	INT	NS	< 0.005	< 0.005	< 0.005	< 0.005
FPC-9A	0.006	0.001	NA	< 0.002	0.004	< 0.002	< 0.002	< 0.004	< 0.001	NS	< 0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	< 0.005	NS	< 0.005	< 0.005	< 0.005	< 0.005
FPC-9B	< 0.001	NS	NS	< 0.001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NS	NS	NS	NS	0.004	< 0.002	0.008	< 0.004	0.003	NS	0.001	< 0.001	< 0.001	NS	0.002	< 0.005	NS	NS	NS	NS	< 0.005	< 0.005	< 0.005	< 0.005
FPC-11B	NS	NS	NS	NS	0.019	< 0.002	0.048	< 0.004	0.001	NS	< 0.001	< 0.001	< 0.001	NS	0.012	< 0.005	NS	NS	NS	NS	INT	0.007 J+	NS	NS
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	0.005	0.002	NA	< 0.004	< 0.002	< 0.002	< 0.002	< 0.004	< 0.001	NS	0.001	< 0.001	< 0.001	NS	< 0.001	< 0.005	NS	NS	INT	NS	< 0.005	< 0.005	< 0.005	< 0.005
GZ-123	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	NS	0.001	0.001	0.001	NS	< 0.001	< 0.005	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NS	NS	NS	NS	NS	NS	NS	NS	< 0.001	NS	0.001	0.001	NS	< 0.001	< 0.001	< 0.005	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																								
R-3	NS	NA	NS	NS	NA	NA	NA	NS	NS	NA	NA	NA	NA	NS	NA	NA	NA	NS	NA	NA	NA	NA	NA	NS
R-5	NS	NA	NS	NS	NA	NA	NA	NS	NS	NS	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NS	NA	NA	NA	NS
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NS
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NA	NA	NS

Table Notes:

1. All data in milligrams per liter (mg/L), parts per million - Analyzed by Method 200.8
2. An NHDES Ambient Groundwater Quality Standard (AGQS) for Vanadium has not been established.
3. EPA Cleanup Level (CL) for Vanadium is 0.26 mg/L. Exceedances are identified with BOLD text.
4. All data for Total metals, with the exception of the following overburden wells for Sept. 2014 (MW-4, MW-9, MW-10, OP-2, OP-5, AE-1A, AE-2A, AE-3A, AE-4A, FPC-6A, FPC-7A, FPC-8A, FPC-9A and FPC-11A)
5. FPC-3 series December 2016 data is reported in May 2016.

Abbreviations:

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

Benzene in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-00	Apr-01	Aug-01	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																								
BP-4	2	3	2	2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	< 2	< 2	1	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-5D	**6**	< 2	3	2	< 2	2	< 2	2	3	NS	2	2	2	NS	2	2	NS	NS	INT	NS	1	2	1	2
MW-5S	**8**	**7**	**6**	**6**	2	< 2	< 2	< 2	5	NS	4	3	4	NS	4	3	NS	NS	INT	NS	2	2	2	2
MW-6	< 2	< 2	1	< 2	< 2	< 2	< 2	< 2	< 1	NS	< 1	< 1	NA	< 1	< 1	< 1	NS	NS	< 1	NS	< 1	<1	<1	<1
MW-8	**8**	5	5	3	4	< 2	3	5	3	NS	4	4	**6**	NS	**6**	**6**	NS	NS	INT	NS	3	3	2	2
MW-9	5	3	**7**	**10**	5	< 2	5	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-10	< 2	< 2	2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-11	**19**	**22**	**26**	**22**	**14**	**7**	**8**	5	**8**	NS	5	4	3	NS	2	2	NS	NS	INT	NS	2	2	1	2
OP-2	5	3	1	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
OP-5	< 2	< 2	1	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
Operable Unit 2 Wells																								
AE-1A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-1B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NS	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-2A	3	3	2	3	< 2	< 2	< 2	< 2	2	NS	< 1	< 1	1	NS	1	< 1	NS	NS	< 1	NS	< 1	< 1	< 1	< 1
AE-2B	**10**	4	**6**	**8**	5	3	4	3	5	NS	5	2	2	NS	1	2	NS	NS	2	NS	2	1	<1	<1
AE-3A	4	2	3	3	2	< 2	< 2	< 2	2	NS	2	2	2	NS	1	1	NS	NS	1	NS	2	2	1	1
AE-3B	4	4	3	3	2	< 2	< 2	< 2	< 1	NS	< 1	1	1	NS	2	1	NS	NS	INT	NS	< 1	< 1	1	1
AE-4A	NS	NS	NS	NS	< 2	< 2	< 2	< 2	< 1	NS	< 1	< 1	< 1	NS	< 1	< 1	NS	NS	< 1	NS	< 1	< 1	< 1	<1
AE-4B	NS	NS	NS	NS	< 2	< 2	< 2	< 2	< 1	NS	< 1	< 1	< 1	NS	< 1	< 1	NS	NS	< 1	NS	< 1	< 1	< 1	< 1
FPC-2A	NA	NA	NA	NA	< 2	< 2	< 2	< 2	< 1	NS	< 1	< 1	< 1	NS	< 1	< 1	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NS	NS	NS	NS	< 2	< 2	< 2	< 2	< 1	NS	< 1	< 1	< 1	NS	< 1	< 1	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1	<1
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1	<1
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1	<1
FPC-4B	NS	NS	NS	NS	< 2	< 2	NA	< 2	< 1	NS	< 1	< 1	< 1	NS	< 1	< 1	NS	NS	INT	NS	< 1	NA	<1	<1
FPC-5A	< 2	< 2	5	5	< 2	3	2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NS	NS	NS	NS
FPC-5B	**6**	5	< 2	< 2	4	< 2	5	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-6A	< 2	< 2	NS	NS	3	< 2	< 2	< 2	2	NS	< 1	< 1	2	NS	1	1	NS	NS	< 1	NS	1	1	<1	<1
FPC-6B	4	2	4	4	3	3	3	< 2	2	NS	1	< 1	2	NS	1	2	NS	NS	INT	NS	< 1	< 1	< 1	< 1
FPC-7A	NS	NS	NS	NS	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-7B	NS	NS	NS	NS	< 2	< 2	< 2	NA	< 1	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-8A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 1	NS	< 1	< 1	< 1	NS	< 1	< 1	NS	NS	< 1	NS	< 1	< 1	< 1	< 1
FPC-8B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NS	< 1	< 1	< 1	NS	< 1	< 1	NS	NS	INT	NS	< 1	< 1	< 1	< 1
FPC-9A	4	4	3	3	3	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-9B	< 2	NS	NS	< 2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NS	NS	NS	NS	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	NA	NA	NA	NA
FPC-11B	NS	NS	NS	NS	< 2	< 2	< 2	< 2	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	INT	NA	NA	NA
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	**10**	**10**	**10**	**11**	**9**	**7**	**7**	**6**	**6**	NS	**6**	**6**	**7**	NS	**6**	**6**	NS	NS	INT	NS	4	3	2	4
GZ-123	NS	NS	NS	NS	NS	NS	NS	NS	< 1	NS	< 1	< 1	< 1	NS	< 1	< 1	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NS	NS	NS	NS	NS	NS	NS	NS	< 1	NS	< 1	< 1	NS	< 1	< 1	< 1	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																								
R-3	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS
R-5	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	< 0.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.5	< 0.5	NS	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS

Table Notes:

All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)

1. NHDES Ambient Groundwater Quality Standard (AGQS) for Benzene is 5 ug/L. Exceedances are identified with GRAY shading.
2. EPA Cleanup Level (CL) for Benzene is 5 ug/L. Exceedances are identified with BOLD text.
3. FPC-3 series December 2016 data is reported in May 2016.
4.

Abbreviations:

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

Chlorobenzene in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-00	Apr-01	Aug-01	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																								
BP-4	< 2	6	5	5	3	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	5	11	7	5	7	5	4	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-5D	8	3	4	4	4	4	3	4	5	NS	4	3	4	NS	3	3	NS	NS	INT	NS	< 2	< 2	< 2	2
MW-5S	7	7	6	5	3	< 2	< 2	< 2	3	NS	2	2	3	NS	2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	1
MW-6	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	NA	< 2	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
MW-8	3	3	3	< 2	2	2	2	4	3	NS	4	3	7	NS	23	9	NS	NS	INT	NS	2	3	2	3
MW-9	62	66	**122**	**160**	80	25	79	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-10	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-11	6	5	4	4	4	3	3	2	3	NS	2	2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
OP-2	9	6	4	4	3	2	2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
OP-5	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
Operable Unit 2 Wells																								
AE-1A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-1B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NS	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-2A	6	8	5	8	4	3	3	< 2	5	NS	2	2	3	NS	3	< 2	NS	NS	< 2	NS	2	<2	<2	<2
AE-2B	8	4	6	8	5	3	3	3	5	NS	5	3	3	NS	2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
AE-3A	12	7	11	9	8	6	5	6	9	NS	8	7	6	NS	6	6	NS	NS	5	NS	6	7	5	5
AE-3B	10	11	9	8	6	4	2	< 2	< 2	NS	< 2	5	5	NS	7	5	NS	NS	INT	NS	3	3	4	5
AE-4A	NS	NS	NS	NS	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
AE-4B	NS	NS	NS	NS	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
FPC-2A	NA	NA	NA	NA	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NS	NS	NS	NS	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<2	<2
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<2	<2
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<2	<2
FPC-4B	NS	NS	NS	NS	< 2	< 2	NA	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	NA	<2	<2
FPC-5A	< 2	< 2	16	13	< 2	9	6	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NS	NS	NS	NS
FPC-5B	20	17	< 2	< 2	11	< 2	76	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-6A	< 2	< 2	< 2	NS	9	4	3	3	5	NS	< 2	3	5	NS	3	4	NS	NS	3	NS	3	4	<2	2
FPC-6B	7	4	9	8	6	7	7	3	7	NS	4	3	5	NS	4	4	NS	NS	INT	NS	2	2	<2	1
FPC-7A	NS	NS	NS	NS	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-7B	NS	NS	NS	NS	< 2	< 2	< 2	NA	< 2	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-8A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
FPC-8B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
FPC-9A	11	10	8	9	8	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-9B	< 2	NS	NS	< 2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NS	NS	NS	NS	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	NA	NA	NA	NA
FPC-11B	NS	NS	NS	NS	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	INT	NA	NA	NA
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	9	9	10	13	12	9	10	9	10	NS	10	11	11	NS	11	9	NS	NS	INT	NS	6	5	3	6
GZ-123	NS	NS	NS	NS	NS	NS	NS	NS	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NS	NS	NS	NS	NS	NS	NS	NS	< 2	NS	< 2	< 2	NS	< 2	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																								
R-3	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS
R-5	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	< 0.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.5	< 0.5	NS	< 0.5	NS	NS	<0.5	<0.5	NS
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.5	< 0.5	NS	NS	<0.5	<0.5	NS

Table Notes:

All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)

1. NHDES Ambient Groundwater Quality Standard (AGQS) for Chlorobenzene is 100 ug/L. Exceedances are identified with GRAY shading.
2. EPA Cleanup Level (CL) for Chlorobenzene is 100 ug/L. Exceedances are identified with BOLD text.
3. FPC-3 series December 2016 data is reported in May 2016.
4.

Abbreviations:

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

Trans-1,2-Dichloroethene in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-00	Apr-01	Aug-01	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																								
BP-4	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-5D	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
MW-5S	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
MW-6	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	NA	< 2	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
MW-8	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
MW-9	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-10	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-11	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
OP-2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
OP-5	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
Operable Unit 2 Wells																								
AE-1A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-1B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NS	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-2A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
AE-2B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
AE-3A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
AE-3B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
AE-4A	NS	NS	NS	NS	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
AE-4B	NS	NS	NS	NS	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
FPC-2A	NA	NA	NA	NA	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NS	NS	NS	NS	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 2	< 2
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 2	< 2
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 2	< 2
FPC-4B	NS	NS	NS	NS	< 2	< 2	NA	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	NA	<2	<2
FPC-5A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NS	NS	NS	NS
FPC-5B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-6A	< 2	< 2	< 2	NS	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
FPC-6B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
FPC-7A	NS	NS	NS	NS	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-7B	NS	NS	NS	NS	< 2	< 2	< 2	NA	< 2	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-8A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
FPC-8B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
FPC-9A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-9B	< 2	NS	NS	< 2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NS	NS	NS	NS	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	NA	NA	NA	NA
FPC-11B	NS	NS	NS	NS	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	INT	NA	NA	NA
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
GZ-123	NS	NS	NS	NS	NS	NS	NS	NS	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NS	NS	NS	NS	NS	NS	NS	NS	< 2	NS	< 2	< 2	NS	< 2	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																								
R-3	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS
R-5	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	< 0.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.5	< 0.5	NS	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS

Table Notes:

All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)

1. NHDES Ambient Groundwater Quality Standard (AGQS) for Trans-1,2-dichloroethene (Trans-DCE) is 100 ug/L. Exceedances are identified with GRAY shading.
2. EPA Cleanup Level (CL) for Trans-1,2-dichloroethene (Trans-DCE) is 100 ug/L. Exceedances are identified with BOLD text.
3. FPC-3 series December 2016 data is reported in May 2016.
4. **Abbreviations:**

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

1,2-Dichloropropane in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-00	Apr-01	Aug-01	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																								
BP-4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-5D	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
MW-5S	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
MW-6	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	NA	< 2	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
MW-8	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
MW-9	< 4	< 4	< 4	< 4	< 4	< 4	< 4	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-10	< 4	< 4	< 4	< 4	< 4	< 4	< 4	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-11	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
OP-2	< 4	< 4	< 4	< 4	< 4	< 4	< 4	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
OP-5	< 4	< 4	< 4	< 4	< 4	< 4	< 4	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
Operable Unit 2 Wells																								
AE-1A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-1B	< 4	< 4	< 4	< 4	< 4	< 4	< 4	NA	NS	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-2A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
AE-2B	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
AE-3A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
AE-3B	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
AE-4A	NS	NS	NS	NS	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
AE-4B	NS	NS	NS	NS	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
FPC-2A	NA	NA	NA	NA	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NS	NS	NS	NS	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 2	< 2
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 2	< 2
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 2	< 2
FPC-4B	NS	NS	NS	NS	< 4	< 4	NA	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	NA	NA	NA
FPC-5A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NS	NS	NS	NS
FPC-5B	< 4	< 4	< 4	< 4	< 4	< 4	< 4	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-6A	< 4	< 4	< 4	NS	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
FPC-6B	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
FPC-7A	NS	NS	NS	NS	< 4	< 4	< 4	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-7B	NS	NS	NS	NS	< 4	< 4	< 4	NA	< 2	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-8A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
FPC-8B	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	NA	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
FPC-9A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-9B	< 4	NS	NS	< 4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NS	NS	NS	NS	< 4	< 4	< 4	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	NA	NA	NA	NA
FPC-11B	NS	NS	NS	NS	< 4	< 4	< 4	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	INT	NA	NA	NA
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
GZ-123	NS	NS	NS	NS	NS	NS	NS	NS	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NS	NS	NS	NS	NS	NS	NS	NS	< 2	NS	< 2	< 2	NS	< 2	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																								
R-3	NS	< 1	< 1	< 1	< 1	< 1	< 1	< 1	NS	< 0.5	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS
R-5	NS	< 1	< 1	< 1	< 1	< 1	< 1	< 1	NS	< 0.5	< 0.5	< 0.5	< 0.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.5	< 0.5	NS	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS

Table Notes:

All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)

1. NHDES Ambient Groundwater Quality Standard (AGQS) for 1,2-dichloropropane is 5 ug/L. Exceedances are identified with GRAY shading.
2. EPA Cleanup Level (CL) for 1,2-dichloropropane is 5 ug/L. Exceedances are identified with BOLD text.
3. FPC-3 series December 2016 data is reported in May 2016.
4.

Abbreviations:

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

Tetrachloroethene (PCE) in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-00	Apr-01	Aug-01	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																								
BP-4	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-5D	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
MW-5S	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
MW-6	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	NA	< 2	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
MW-8	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
MW-9	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-10	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-11	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
OP-2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
OP-5	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
Operable Unit 2 Wells																								
AE-1A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-1B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NS	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-2A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
AE-2B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
AE-3A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
AE-3B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
AE-4A	NS	NS	NS	NS	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
AE-4B	NS	NS	NS	NS	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
FPC-2A	NA	NA	NA	NA	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NS	NS	NS	NS	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 2	< 2
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 2	< 2
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 2	< 2
FPC-4B	NS	NS	NS	NS	< 2	< 2	NA	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	NA	NA	NA
FPC-5A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NS	NS	NS	NS
FPC-5B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-6A	< 2	< 2	< 2	NS	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
FPC-6B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
FPC-7A	NS	NS	NS	NS	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-7B	NS	NS	NS	NS	< 2	< 2	< 2	NA	< 2	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-8A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	< 2	NS	< 2	< 2	< 2	< 2
FPC-8B	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
FPC-9A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-9B	< 2	NS	NS	< 2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NS	NS	NS	NS	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	NA	NA	NA	NA
FPC-11B	NS	NS	NS	NS	< 2	< 2	< 2	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	INT	NA	NA	NA
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	INT	NS	< 2	< 2	< 2	< 2
GZ-123	NS	NS	NS	NS	NS	NS	NS	NS	< 2	NS	< 2	< 2	< 2	NS	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NS	NS	NS	NS	NS	NS	NS	NS	< 2	NS	< 2	< 2	NS	< 2	< 2	< 2	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																								
R-3	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS
R-5	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	< 0.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.5	< 0.5	NS	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS

Table Notes:

All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)

1. NHDES Ambient Groundwater Quality Standard (AGQS) for tetrachloroethene (PCE) is 5 ug/L. Exceedances are identified with GRAY shading.
2. EPA Cleanup Level (CL) for tetrachloroethene (PCE) is 3.5 ug/L. Exceedances are identified with BOLD text.
3. FPC-3 series December 2016 data is reported in May 2016.
4.

Abbreviations:

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

TABLE 8
Contaminants of Concern Analytical Data (November 2000 – May 2017)
Methyl Ethyl Ketone (MEK) in Groundwater
Coakley Landfill Superfund Site
North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-00	Apr-01	Aug-01	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																								
BP-4	< 50	< 50	< 50	< 50	< 50	< 50	< 50	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	< 50	< 50	< 50	< 50	< 50	< 50	< 50	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-5D	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	INT	NS	< 10	< 10	< 10	< 10
MW-5S	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	INT	NS	< 10	< 10	< 10	< 10
MW-6	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	NA	< 10	< 10	< 10	NS	NS	< 10	NS	< 10	< 10	< 10	< 10
MW-8	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	INT	NS	< 10	< 10	< 10	< 10
MW-9	< 50	< 50	< 50	< 50	< 50	< 50	< 50	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-10	< 50	< 50	< 50	< 50	< 50	< 50	< 50	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	INT	NS	< 10	< 10	< 10	< 10
OP-2	< 50	< 50	< 50	< 50	< 50	< 50	< 50	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
OP-5	< 50	< 50	< 50	< 50	< 50	< 50	< 50	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
Operable Unit 2 Wells																								
AE-1A	< 50	< 50	< 50	< 50	< 50	< 50	< 50	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-1B	< 50	< 50	< 50	< 50	< 50	< 50	< 50	NA	NS	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-2A	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	< 10	NS	< 10	< 10	< 10	< 10
AE-2B	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	< 10	NS	< 10	< 10	< 10	< 10
AE-3A	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	< 10	NS	< 10	< 10	< 10	< 10
AE-3B	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	INT	NS	< 10	< 10	< 10	< 10
AE-4A	NS	NS	NS	NS	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	< 10	NS	< 10	< 10	< 10	< 10
AE-4B	NS	NS	NS	NS	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	< 10	NS	< 10	< 10	< 10	< 10
FPC-2A	NA	NA	NA	NA	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NS	NS	NS	NS	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 10	< 10
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 10	< 10
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 10	< 10
FPC-4B	NS	NS	NS	NS	< 50	< 50	NA	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	INT	NS	< 10	NA	NA	NA
FPC-5A	< 50	< 50	< 50	< 50	< 50	< 50	< 50	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NS	NS	NS	NS
FPC-5B	< 50	< 50	< 50	< 50	< 50	< 50	< 50	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-6A	< 50	< 50	< 50	NS	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	< 10	NS	< 10	< 10	< 10	< 10
FPC-6B	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	INT	NS	< 10	< 10	< 10	< 10
FPC-7A	NS	NS	NS	NS	< 50	< 50	< 50	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-7B	NS	NS	NS	NS	< 50	< 50	< 50	NA	< 10	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-8A	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	< 10	NS	< 10	< 10	< 10	< 10
FPC-8B	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	NA	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	INT	NS	< 10	< 10	< 10	< 10
FPC-9A	< 50	< 50	< 50	< 50	< 50	< 50	< 50	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-9B	< 50	NS	NS	< 50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NS	NS	NS	NS	< 50	< 50	< 50	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	NA	NA	NA	NA
FPC-11B	NS	NS	NS	NS	< 50	< 50	< 50	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	INT	NA	NA	NA
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	INT	NS	< 10	< 10	< 10	< 10
GZ-123	NS	NS	NS	NS	NS	NS	NS	NS	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NS	NS	NS	NS	NS	NS	NS	NS	< 10	NS	< 10	< 10	NS	< 10	< 10	< 10	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																								
R-3	NS	< 12.5	< 12.5	< 12.5	< 12.5	< 12.5	< 12.5	< 12.5	NS	< 5	< 5	< 5	< 5	NS	< 5	< 5	< 5	NS	< 5	< 5	< 5	< 5	< 5	NS
R-5	NS	< 12.5	< 12.5	< 12.5	< 12.5	< 12.5	< 12.5	< 12.5	NS	< 5	< 5	< 5	< 5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 5	< 5	NS	< 5	NS	< 5	< 5	< 5	NS
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 5	< 5	< 5	< 5	< 5	< 5	< 5	NS
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 5	< 5	NS	< 5	< 5	< 5	NS

Table Notes:

1. All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)
2. NHDES Ambient Groundwater Quality Standard (AGQS) for methyl ethyl ketone (MEK, 2-butanone) is 4000 ug/L. Exceedances are identified with GRAY shading.
3. EPA Cleanup Level (CL) for methyl ethyl ketone (MEK, 2-butanone) is 200 ug/L. Exceedances are identified with BOLD text.
4. FPC-3 series December 2016 data is reported in May 2016.

Abbreviations:

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

Tetrahydrofuran (THF) in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-00	Apr-01	Aug-01	Aug-02	Aug-03	Aug-04	Aug-05	Aug-06	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																								
BP-4	< 30	< 30	< 30	< 30	< 30	< 30	< 30	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	< 30	< 30	< 30	< 30	< 30	< 30	< 30	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-5D	**162**	60	< 30	101	85	142	88	110	110	NS	110	90	90	NS	110	90	NS	NS	INT	NS	50	50	80J-	80
MW-5S	44	35	< 30	46	< 30	34	< 30	< 30	60	NS	40	40	40	NS	40	30	NS	NS	INT	NS	20	20	20	10
MW-6	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 10	NS	< 10	< 10	NA	< 10	< 10	< 10	NS	NS	< 10	NS	< 10	< 10	< 10	< 10
MW-8	**248**	**157**	< 30	**175**	**184**	**282**	**273**	**239**	**180**	NS	**180**	**180**	**160**	NS	140	100	NS	NS	INT	NS	150	140	**160J-**	110
MW-9	< 30	< 30	< 30	137	< 30	< 30	84	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-10	< 30	< 30	< 30	< 30	< 30	< 30	< 30	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-11	**246**	**228**	< 30	**225**	130	114	< 30	50	60	NS	30	30	20	NS	20	10	NS	NS	INT	NS	10	10	10J-	10
OP-2	< 30	< 30	< 30	< 30	< 30	< 30	87	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
OP-5	< 30	< 30	< 30	< 30	< 30	< 30	< 30	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
Operable Unit 2 Wells																								
AE-1A	< 30	< 30	< 30	< 30	< 30	< 30	< 30	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-1B	< 30	< 30	< 30	< 30	< 30	< 30	< 30	NA	NS	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-2A	30	33	< 30	45	< 30	< 30	< 30	< 30	20	NS	< 10	10	< 10	NS	< 10	< 10	NS	NS	< 10	NS	< 10	< 10	< 10	< 10
AE-2B	**157**	86	< 30	127	104	92	81	69	60	NS	70	50	30	NS	30	30	NS	NS	30	NS	30	30	20	20
AE-3A	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	< 10	NS	< 10	< 10	< 10	< 10
AE-3B	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	INT	NS	< 10	< 10	< 10	< 10
AE-4A	NS	NS	NS	NS	< 30	< 30	< 30	< 30	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	< 10	NS	< 10	< 10	< 10	< 10
AE-4B	NS	NS	NS	NS	< 30	< 30	< 30	< 30	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	< 10	NS	< 10	< 10	< 10	< 10
FPC-2A	NA	NA	NA	NA	< 30	< 30	< 30	< 30	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NS	NS	NS	NS	< 30	< 30	< 30	< 30	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 10	< 10
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 10	< 10
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 10	< 10
FPC-4B	NS	NS	NS	NS	< 30	< 30	NA	< 30	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	INT	NS	< 10	NA	NA	NA
FPC-5A	< 30	< 30	< 30	< 30	< 30	< 30	< 30	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NS	NS	NS	NS
FPC-5B	< 30	< 30	< 30	< 30	< 30	< 30	79	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-6A	< 30	< 30	< 30	NS	< 30	< 30	< 30	< 30	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	< 10	NS	< 10	< 10	< 10	< 10
FPC-6B	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	INT	NS	< 10	< 10	< 10	< 10
FPC-7A	NS	NS	NS	NS	< 30	< 30	< 30	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-7B	NS	NS	NS	NS	< 30	< 30	< 30	NA	< 10	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-8A	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	< 10	NS	< 10	< 10	< 10	< 10
FPC-8B	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	NA	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	INT	NS	< 10	< 10	< 10	< 10
FPC-9A	32	< 30	< 30	30	< 30	< 30	< 30	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-9B	< 30	NS	NS	< 30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NS	NS	NS	NS	< 30	< 30	< 30	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	NA	NA	NA	NA
FPC-11B	NS	NS	NS	NS	< 30	< 30	< 30	NA	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	INT	NA	NA	NA
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	**169**	120	< 30	112	113	131	151	83	80	NS	70	80	70	NS	70	50	NS	NS	INT	NS	20	20	20J+	30
GZ-123	NS	NS	NS	NS	NS	NS	NS	NS	< 10	NS	< 10	< 10	< 10	NS	< 10	< 10	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NS	NS	NS	NS	NS	NS	NS	NS	< 10	NS	< 10	< 10	NS	< 10	< 10	< 10	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																								
R-3	NS	< 7.5	< 7.5	< 7.5	< 7.5	< 7.5	< 7.5	< 7.5	NS	< 5	< 5	< 5	< 5	NS	< 5	< 5	< 5	NS	< 5	< 5	< 5	< 5	< 5	NS
R-5	NS	< 7.5	< 7.5	< 7.5	< 7.5	< 7.5	< 7.5	< 7.5	NS	< 5	< 5	< 5	< 5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 5	< 5	NS	< 5	NS	< 5	< 5	< 5	NS
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 5	< 5	< 5	< 5	< 5	< 5	< 5	NS
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 5	< 5	NS	< 5	< 5	< 5	NS

Table Notes:

All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)

1. NHDES Ambient Groundwater Quality Standard (AGQS) for tetrahydrofuran (THF) is 154 ug/L. Exceedances are identified with GRAY shading.
2. EPA Cleanup Level (CL) for tetrahydrofuran (THF) is 154 ug/L. Exceedances are identified with BOLD text.
3. FPC-3 series December 2016 data is reported in May 2016.
4.

Abbreviations:

NA = Not Analyzed; NS = Not Sampled; INT = Interval Sampled; < ## = reported concentration is less than the detection limit (##)

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

Tertiary Butyl Alchohol (TBA) in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Nov-07	Jan-08	Aug-08	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells																
BP-4	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-5D	60	NS	50	40	40	NS	50	40	NS	NS	INT	NS	60	40	50	40
MW-5S	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	INT	NS	< 30	< 30	< 30	< 30
MW-6	< 30	NS	< 30	< 30	NA	< 30	< 30	< 30	NS	NS	< 30	NS	< 30	< 30	< 30	< 30
MW-8	70	NS	70	60	50	NS	50	40	NS	NS	INT	NS	50	40	50	50
MW-9	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-10	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
MW-11	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	INT	NS	< 30	< 30	< 30	< 30
OP-2	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
OP-5	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
Operable Unit 2 Wells																
AE-1A	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-1B	NS	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
AE-2A	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	< 30	NS	< 30	< 30	< 30	< 30
AE-2B	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	< 30	NS	< 30	< 30	< 30	< 30
AE-3A	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	< 30	NS	< 30	< 30	< 30	< 30
AE-3B	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	INT	NS	< 30	< 30	< 30	< 30
AE-4A	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	< 30	NS	< 30	< 30	< 30	< 30
AE-4B	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	< 30	NS	< 30	< 30	< 30	< 30
FPC-2A	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 30	< 30
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 30	< 30
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 30	< 30
FPC-4B	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	INT	NS	< 30	NA	NA	NA
FPC-5A	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NS	NS	NS	NS
FPC-5B	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-6A	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	< 30	NS	< 30	< 30	< 30	< 30
FPC-6B	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	INT	NS	< 30	< 30	< 30	< 30
FPC-7A	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-7B	< 30	NS	NA	NA	NA	NS	NA	NA	NS	NS	INT	NS	NA	NA	NA	NA
FPC-8A	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	< 30	NS	< 30	< 30	< 30	< 30
FPC-8B	NA	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	INT	NS	< 30	< 30	< 30	< 30
FPC-9A	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	NA
FPC-9B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	NA	NA	NA	NA
FPC-11B	NA	NS	NA	NA	NA	NS	NA	NA	NS	NS	NS	NS	INT	NA	NA	NA
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	INT	NS	< 30	< 30	< 30	< 30
GZ-123	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	< 30	NS	< 30	< 30	NS	< 30	< 30	< 30	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells																
R-3	NS	< 30	< 30	< 30	< 30	NS	< 30	< 30	< 30	NS	< 30	< 30	< 30	< 30	< 30	NS
R-5	NS	< 30	< 30	< 30	< 30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
346BHR	NS	NS	NS	NS	NS	NS	NS	< 30	< 30	NS	< 30	NS	< 30	< 30	< 30	NS
339BHR	NS	NS	NS	NS	NS	NS	NS	NS	< 30	< 30	< 30	< 30	< 30	< 30	< 30	NS
415BHR	NS	NS	NS	NS	NS	NS	NS	NS	NS	< 30	< 30	NS	< 30	< 30	< 30	NS

Table Notes:

All data in micrograms per liter (ug/L), parts per billion - Analyzed by Method 8260B (monitoring well) or Method 524 (water supply wells)

1. NHDES Ambient Groundwater Quality Standard (AGQS) for tertiary butyl alchohol (TBA) is 40 ug/L. Exceedances are identified with GRAY shading.
2. An EPA Cleanup Level (CL) for Chlorobenzene has not been established.
3. Tertiary butyl alcohol (TBA) not included on Method 8260B parameter list prior to November 2007.
4. FPC-3 series December 2016 data is reported in May 2016.

5\.

Abbreviations:

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

1,4-Dioxane (Low Level Method) in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	Aug-09	Aug-10	Feb-11	Aug-11	Aug-12	Mar-13	Apr-13	Aug-13	Feb-14	Sep-14	Sep-15	May-16	May-17
Operable Unit 1 Wells													
BP-4	NA	NA	9	10	13	NS	NS	9.6	NS	12	11	11	7.5
MW-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	NA	6	NS	6	2.5	NS	NS	4.8	NS	6.9	8.5	5.2	4.6
MW-5D	140	150	NS	140	140	NS	NS	INT	NS	130	150	120	110
MW-5S	70	90	NS	70	61	NS	NS	INT	NS	49	57	42	30
MW-6	< 1	NA	NS	< 1	< 0.25	NS	NS	< 0.25	NS	< 0.25	< 0.25	< 0.25	< 0.25
MW-8	310	230	NS	200	210	NS	NS	INT	NS	200	240	190	150
MW-9	NA	16	NS	14	30	NS	NS	6.1	NS	28	26	3.5	<0.25
MW-10	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NA	<0.25
MW-11	100	45	NS	40	56	NS	NS	INT	NS	41	38	37	27
OP-2	NA	1	NS	1	1	NS	NS	1.2	NS	1.5	1.6	0.64	0.66
OP-5	NA	< 1	NS	< 1	NA	NS	NS	NA	NS	NA	NA	NA	<0.25
Operable Unit 2 Wells													
AE-1A	NA	NA	NS	< 1	NA	NS	NS	NA	NS	NA	NA	NA	0.88
AE-1B	NA	NA	NS	< 1	NA	NS	NS	NA	NS	NA	NA	NA	0.97
AE-2A	NA	12	NS	14	16	NS	NS	15	NS	16	13	6.5	5.9
AE-2B	NA	110	NS	80	82	NS	NS	88	NS	87	96	70	58
AE-3A	NA	23	NS	19	24	NS	NS	21	NS	25	24	20	14
AE-3B	NA	24	NS	19	27	NS	NS	INT	NS	26	25	26	15
AE-4A	NA	NA	NA	NA	< 0.25	NS	NS	NA	NS	NA	<0.25	<0.25	<0.25
AE-4B	NA	NA	NA	NA	< 0.25	NS	NS	NA	NS	NA	<0.25	<0.25	<0.25
FPC-2A	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
FPC-2B	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
FPC-3A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.25	<0.25
FPC-3B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.25	<0.25
FPC-3C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.41	0.48
FPC-4B	NA	NA	NA	NA	< 0.25	NA	NA	INT	NS	NA	NA	NA	<0.25
FPC-5A	NA	NA	NS	27	25	NS	NS	29	NS	NS	NS	NS	NS
FPC-5B	NA	NA	NS	50	53	NS	NS	INT	NS	64	67	50	40
FPC-6A	NA	NA	NS	NA	31	NS	NS	21	NS	26	30	9.5	8
FPC-6B	NA	NA	NS	NA	23	NS	NS	INT	NS	19	19	7.6	7.1
FPC-7A	NA	NA	NA	< 1	< 0.25	NA	NA	NA	NS	NA	NA	NA	<0.25
FPC-7B	NA	NA	NA	< 1	< 0.25	NA	NA	INT	NS	NA	NA	NA	<0.25
FPC-8A	NA	< 1	NS	< 1	0.51	NS	NS	0.6	NS	0.60	0.70	0.58	0.48
FPC-8B	NA	1	NS	< 1	0.93	NS	NS	INT	NS	0.62	0.81	0.58	0.49
FPC-9A	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NS	14
FPC-9B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-9C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FPC-11A	NA	NA	NS	NA	NA	NS	NS	NA	NS	NA	NA	NS	0.93
FPC-11B	NA	NA	NS	NA	NA	NS	NS	NA	NS	INT	1.4	0.94	0.55
FPC-11C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GZ-105	NA	NA	NS	80	98	NS	NS	INT	NS	69	62	39	65
GZ-123	NA	NA	NS	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
GZ-125	NA	NA	NS	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
Water Supply Wells													
R-3	NA	NA	NS	NA	0.4	0.45	NS	0.45	0.42	0.37	0.37	0.45	0.33
R-5	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
346BHR	NS	NS	NS	NS	< 0.25	NS	NS	< 0.25	NS	< 0.25	< 0.25	< 0.25	<0.25
339BHR	NS	NS	NS	NS	NS	NS	0.38	0.42	0.63	0.42	0.74	0.51	0.35
415BHR	NS	NS	NS	NS	NS	NS	< 0.25	< 0.25	NS	< 0.25	< 0.25	< 0.25	<0.25

Table Notes:

All data in micrograms per liter (ug/L), parts per billion - Analysis by Method 8260B SIM (a low level detection limit methodology)

1. 1,4-dioxane not included on Method 8260B parameter list prior to August 2010. First analyses by 8260B SIM were completed in Aug. 2009.
2. Results for standard Method 8260B (detection limit of 50 ug/L) are not provided in this table
3. NHDES Ambient Groundwater Quality Standard (AGQS) for 1,4-dioxane is 3 ug/L. Exceedances are identified with GRAY shading.
4. An EPA Cleanup Level (CL) for 1,4-dioxane has not been established.
5. Residential results for January 2107 are reported for the May 2107 data.
6. FPC-3 series December 2016 data is reported in May 2016.
7.

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

PFOA in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	May-16	May-17
Operable Unit 1 Wells		
BP-4	57.6	62.3
MW-2	NS	NS
MW-4	756	1240D
MW-5D	61.2	119
MW-5S	647	849D
MW-6	NS	11.4J
MW-8	262	435
MW-9	656	386
MW-10	NS	186
MW-11	693	799D
OP-2	NS	87.1
OP-5	NS	186J
Operable Unit 2 Wells		
AE-1A	6.1	5.48J
AE-1B	5.71	7.38J
AE-2A	640	827
AE-2B	670	902
AE-3A	196	387
AE-3B	195	384
AE-4A	<8.26	<1.12
AE-4B	1.25	<1.07
FPC-2A	NS	NS
FPC-2B	NS	NS
FPC-3A	<7.66	<1.05
FPC-3B	<8.04	<1.05
FPC-3C	1.83J	<1.08
FPC-4B	<8.33	<1.09
FPC-5A	NS	NS
FPC-5B	108	192
FPC-6A	126	93.3
FPC-6B	74.9	80.4
FPC-7A	4.45	5.64J
FPC-7B	8.65	5.56J
FPC-8A	8.98	10.3J
FPC-8B	2.98	3.96J
FPC-9A	81	111
FPC-9B	NS	NS
FPC-9C	NS	NS
FPC-11A	19.5	24.9
FPC-11B	29.6	14.0J
FPC-11C	NS	NS
GZ-105	198	340
GZ-123	NS	NS
GZ-125	NS	NS
Water Supply Wells		
R-3	<8	<8
R-5	NS	NS
346BHR	<8	<8
339BHR	25	17.8
415BHR	<8	<8

Table Notes:

All data in nanograms per liter (ng/L), parts per trillion - Analysis by Method 537 Modified

1. NHDES Ambient Groundwater Quality Standard (AGQS) for PFOA is 70 ng/L. Exceedances are identified with GRAY shading.
2. An EPA Cleanup Level (CL) for PFOA is 70 ng/L. Rexceedances are identfiied with Gray shading.
3. Residential results for July 2016 are reported under May 2016 and January 2017 are reported under May 2017
4. FPC-3 series December 2016 data is reported in May 2016.

5. **Abbreviations:**

TABLE 8
Contaminants of Concern Analytical Data (November 2000 – May 2017)
PFOS in Groundwater
Coakley Landfill Superfund Site
North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	May-16	May-17
Operable Unit 1 Wells		
BP-4	13.3	7.97J
MW-2	NS	NS
MW-4	30.8	55.8
MW-5D	29.3	23.9
MW-5S	84	89.5
MW-6	NS	3.79J
MW-8	212	224J+
MW-9	452	429
MW-10	NS	105
MW-11	308	318
OP-2	NS	12.7J
OP-5	NS	<1.05
Operable Unit 2 Wells		
AE-1A	3.06	1.78J
AE-1B	3.71	3.01J
AE-2A	324	297
AE-2B	463	456
AE-3A	72.1	91.9
AE-3B	62.8	90.9
AE-4A	<8.26	<1.02
AE-4B	<8.19	<0.98
FPC-2A	NS	NS
FPC-2B	NS	NS
FPC-3A	<7.66	<0.96
FPC-3B	1J	<0.98
FPC-3C	0.976J	<0.99
FPC-4B	<8.33	<0.99
FPC-5A	NS	NS
FPC-5B	31	30.1
FPC-6A	28.4	18.9J
FPC-6B	17.6	13.0J
FPC-7A	1.78	1.88J
FPC-7B	3.27	1.35J
FPC-8A	3.89	2.84J
FPC-8B	1.46	2.53J
FPC-9A	26.5	20.9J
FPC-9B	NS	NS
FPC-9C	NS	NS
FPC-11A	5.21	1.60J
FPC-11B	16.5	3.77J
FPC-11C	NS	NS
GZ-105	130	163
GZ-123	NS	NS
GZ-125	NS	NS
Water Supply Wells		
R-3	<8	<8
R-5	NS	NS
346BHR	<8	<8
339BHR	<8	<8
415BHR	<8	<8

Table Notes:

All data in nanograms per liter (ng/L), parts per trillion - Analysis by Method 537 Modified

1. NHDES Ambient Groundwater Quality Standard (AGQS) for PFOS is 70 ng/L. Exceedances are identified with GRAY shading.
2. An EPA Cleanup Level (CL) for PFOA is 70 ng/L. Rexceedances are identfiied with Gray shading.
3. Residential results for July 2016 are reported under May 2016 and January 2017 are reported under May 2017
4. FPC-3 series December 2016 data is reported in May 2016.

5. **Abbreviations:**

TABLE 8

Contaminants of Concern Analytical Data (November 2000 – May 2017)

PFAs Combination in Groundwater

Coakley Landfill Superfund Site

North Hampton and Greenland, New Hampshire

Well ID / Appox. Date	May-16	May-17
Operable Unit 1 Wells		
BP-4	70.9	70.3
MW-2	NS	NS
MW-4	786.8	1295.8
MW-5D	90.5	142.9
MW-5S	731	938.5
MW-6	NS	15.2
MW-8	474	659
MW-9	1108	815
MW-10	NS	291
MW-11	1001	1117
OP-2	NS	99.8
OP-5	NS	1.86
Operable Unit 2 Wells		
AE-1A	9.16	7.26
AE-1B	9.42	10.4
AE-2A	964	1124
AE-2B	1133	1358
AE-3A	268.1	478.9
AE-3B	257.8	474.9
AE-4A	ND	ND
AE-4B	1.25	ND
FPC-2A	NS	NS
FPC-2B	NS	NS
FPC-3A	ND	ND
FPC-3B	1J	ND
FPC-3C	2.08J	ND
FPC-4B	ND	ND
FPC-5A	NS	NS
FPC-5B	139	222.1
FPC-6A	154.4	112.2
FPC-6B	92.5	93.4
FPC-7A	6.23	7.52
FPC-7B	11.9	6.91
FPC-8A	12.9	13.14
FPC-8B	4.4	6.49
FPC-9A	107.5	131.9
FPC-9B	NS	NS
FPC-9C	NS	NS
FPC-11A	24.7	26.5
FPC-11B	46.1	17.8
FPC-11C	NS	NS
GZ-105	328	503
GZ-123	NS	NS
GZ-125	NS	NS
Water Supply Wells		
R-3	ND	ND
R-5	NS	NS
346BHR	ND	ND
339BHR	25	17.8
415BHR	ND	ND

Table Notes:

All data in nanograms per liter (ng/L), parts per trillion - Analysis by Method 537 Modified

1. NHDES Ambient Groundwater Quality Standard (AGQS) for PFOA/PFOS combined is 70 ug/L. Exceedances are identified with GRAY shading.
2. An EPA Cleanup Level (CL) for PFOA/PFOS combined is 70 ng/L. Rexceedances are identfiied with Gray shading.
3. Residential results for July 2016 are reported under May 2016 and January 2017 are reported under May 2017
4. FPC-3 series December 2016 data is reported in May 2016.

Abbreviations: